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THE
PHYSICIAN AND SURGEON

A MONTHLY MAGAZINE,

DEVOTED TO MEDICAL AND SURGICAL SCIENCE.

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ORIGINAL ARTICLES.

NAPHTHALINE: A NEW ANTISEPTIC.*

BY C. BONNING, M. D., STRASSBURG, GERMANY.

Naphthaline was introduced as an antiseptic in September, 1881, by Dr. E. Fischer, lecturer on surgery in the University of Strassburg.

Since this time it has been used to a great extent and with very good results in the surgical wards of the medical department of this university, which are under the charge of Professor Lücke.

As Naphthaline is a *non-poisonous* remedial agent, and is used only in the form of powder, which undoubtedly is the cleanliest and most facile way in which an antiseptic may be used, and as it is the cheapest antiseptic substance known, I think it well deserves an introduction as such to the medical profession of America.

Naphthaline, $C^{10}H^{8}$, was discovered by Garden in coal-tar in 1820. It is produced when organic bodies are distilled at very high temperatures. It consists of brilliant, white, scaly crystals, very friable and of a peculiar odor. It melts at 79.2° centigrade and boils at 218° centigrade; it sublimes even at low temperatures and distills readily along with the vapor of water. It is insoluble in water, only slightly soluble in cold alcohol, but dissolves readily in hot alcohol, ether, fatty and essential oils, and burns with a dense smoky flame. It is one of the most constant organic compounds; in its chemical actions resembles benzole. For a more detailed description of it I refer to the handbooks on chemistry.

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*This article was contributed by the author in German, and has been translated by R. Humphrey Stevens, M. D., Physician to Saint Mark's Hospital, Grand Rapids, Michigan.

As a remedial agent, naphthaline was first employed in 1842 by Rossignon, Dupasquier and Emery, three French physicians. Rossignon used it chiefly as a substitute for camphor for local applications, for the purpose of destroying vermin, and as a remedy against worms; whilst Dupasquier recommended it very highly as a solvent and expectorant in chronic catarrhs of the respiratory tract. Emery was successful in the treatment of a number of cases of psoriasis with naphthaline.

Though it was so highly recommended by these French writers, naphthaline was never used to any great extent by other practitioners. Several German physicians (Veiel, Hebra, Kleinhans,) who tried it in skin diseases, seem to have obtained only little or no benefit from its use.

Naphthaline, therefore, was almost forgotten when Dr. Fischer recommended it last year as an antiseptic, after having made a series of experiments to prove its antiseptic powers. The results of his experiments were published in the *Berliner Klinische Wochenschrift*, 1881, Number XL, and 1882, Numbers VIII and IX, to which papers I refer all who wish further detail.

In the next number of the above journal, Professor Fürbringer gives the results of his experience with naphthaline in the treatment of scabies, which are most encouraging. Dr. Auschütz and Dr. Höftman, both of Königsberg, who tried the naphthaline as a dressing for wounds, ulcers and minor surgical cases for several weeks, published their experiences with naphthaline in the *Centralblatt für Chirurgie*, 1882, Numbers XXXII and XLIII. They both admit the antiseptic properties of naphthaline, but claim to have frequently found the naphthaline powder obstructing the drainage tubes or openings of wounds, and thus preventing the free evacuation of secretions. Dr. Höftman also claims that the naphthaline sometimes produced intense pain after being applied.

I myself have seen the naphthaline used every day for the last year, in the surgical wards here, not only as a dressing for all varieties of wounds, abscesses, chancroids, etc., but also after large operations where the use of an efficient antiseptic is of the highest importance. For example, I have seen it employed instead of carbolic acid after amputations, exarticulations, resections, extirpations of tumors, etc., and can recommend it wherever an antiseptic is needed. It will prove a very welcome addition to the list of antiseptics in hospital, dispensary and country practice, where facility of manipulation and transportation as well as cheapness are of the highest importance.

As it is non-poisonous it can be substituted with advantage for carbolic acid or iodoform in cases where the intoxicating properties of these substances might prove injurious, as after operations on children or where very large wounds are made.

I myself have never seen any of the unpleasant effects following the use of naphthaline of which Dr. Auschütz and Dr. Höftman complain, *provided a pure article was employed*, and I think these bad effects are due solely to the use of an *impure* preparation of napthaline. It is of the greatest importance that the naphthaline which is to be used in surgery, should be chemically pure, since after the application of an impure article pain and even eczema may be induced.

In order to enable every physician to judge at once whether he has pure napthaline at his disposal, I quote the test for the purity of naphthaline given by Dr. G. Schultz, lecturer on chemistry in the University of Strassburg:

"Boil ten to twenty grammes of naphthaline for some time (say ten to fifteen minutes) with fifty to one hundred cubic centimeters of *dilute* solution of caustic soda (one per cent.) Allow the liquid to cool, then filter. The napthaline remains undissolved on the filter, whilst impurities (phenol. kresol, etc.) will be dissolved in the filtrate. To the latter add sulphuric acid enough to produce an acid re-action, then add a few drops of bromine water. Phenol or kresol being present in small quantities the liquid becomes opalescent, if in larger quantities a precipitate is formed which is soluble in alkalies."

Besides this pure naphthaline always stays white; while impure naphthaline turns red. Such a preparation should never be used in surgery. A perfectly pure naphthaline is now sold in Germany for half a mark (twelve cents) a pound. The only objections which may be raised against naphthaline are its unpleasant odor, and its insolubility in water.

The odor of naphthaline is by no means as disagreeable as that of iodoform, yet some will object to its use on this account. The purer the preparation the less disagreeable the odor.

As far as its insolubility in water is concerned, in a great many cases this will be a drawback and will prevent its use wherever a soluble disinfectant is wanted.

But there yet remain many cases where it makes no difference whether the disinfecting agent is soluble or not, or where even an insoluble antiseptic is preferred, so there is a large field for the employment of naphthaline.

To conclude let me describe the way of applying the naphthaline as it is generally done in the surgical wards here:

Superficial wounds, ulcers, abscesses, etc., etc., are sprinkled with the dry naphthaline, then covered with muslin, absorbent cotton or lint and then a bandage is applied. Deep wounds, wounds with loss of substance and the like are filled with dry naphthaline and then dressed as above. The material used for dressing as muslin, cotton lint, is sprinkled with dry naphthaline before being applied.

For scabies, naphthaline is used in the form of an ointment prepared by mixing equal parts of naphthaline and vaseline, or two parts of vaseline to one of naphthaline.

I have seen a few cases of herpes tonsurans speedily cured by applying even a weaker ointment of naphthaline (one to four or one to eight).

For destroying vermin, fleas lice, crabs, etc., the naphthaline is excellent and may be used as a powder or ointment.

The impure naphthaline which, by the way, is obtained as a by-product in enormous quantities during coal-tar distillation can be had for almost nothing and may also be used for disinfecting water-closets, sick rooms, hospital wards, etc., etc. For the latter purpose the naphthaline is merely sprinkled on the floor of the apartments which are to be disinfected.

The naphthaline gradually volatilizes and the room will be thus filled with the vapor. No unpleasant effects whatever are produced by the inhalation of this gas.

The internal use of naphthaline is hardly indicated, as it has only little effect on the human system. If administered in does of two to three grammes it will produce several watery stools and occasionally a slight burning sensation during micturition.

This latter symptom is also sometimes noticed after applying naphthaline to large wounds especially if the naphthaline used is not absolutely pure, although in these cases I have never been able to detect the presence of naphthaline in the urine.

[I have had some experience with naphthaline as a dressing and believe that Dr. Auschütz' unfavorable impression in regard to naphthaline was due to inattention and carelessness on the part of the attendants rather than to the inefficiency of the naphthaline. I can dress a chancroidal ulcer with iodoform in such a way that a crust will form and the secretion will decompose beneath and a "stinking sore" will be the result, while the parts are literally buried with iodoform. I do not hold the iodoform to account for my unpainstaking efforts however.—TRANSLATOR.]

SOME EXPERIMENTS WITH BACTERIA.*

BY N. H. WILLIAMS, M. D., JACKSON, MICHIGAN.

I wish to present you briefly with the results of a few experiments made during the last two months showing the antiseptic properties of a few reagents. In using the word antiseptic, I do so with reference to the demonstrated theory of Pasteur;

---

*A paper read before the Jackson County Medical Society, August 3, 1882.

that putrefactive changes are due to germs, ever present in the air, which, finding a congenial nidus multiply enormously, producing the phenomena of decomposition as a result of their action. I began this to ascertain for my own satisfaction the comparative antiseptic properties of the different cinchona alkaloids. Afterwards I extended the investigation, somewhat, and give you briefly the results.

The bacteria used were those appearing in a cold infusion of meat, (about one-half ounce of shreds of beef being added to a half pint of water and kept at a temperature of from 90° to 100° Fahrenheit.) Bacteria appeared in about twenty-four hours, the time varying somewhat according to amount of light and heat. They appear sooner, and increase more rapidly when the liquid is kept warm and in the shade, sunshine not being favorable to their development. Bacteria in comparatively small numbers appear in the liquid before any putrid odor is perceptible. Their presence is manifested to the unaided eye by a slight cloudiness, said to be caused by the bacteria having a slightly different refractive index from the containing liquid. A magnification of four hundred or six hundred diameters is sufficient for their ordinary observation. As their vitality seemed to vary according to the age, putridity, and temperature of the liquid, care was taken that these conditions should be as nearly as possible the same, in the various experiments, so that, though the results of different trials might vary somewhat, probably the comparative powers of the different reagents tried would be quite uniform.

When to an infusion of meat swarming with bacteria the one ten-thousandth part of sulphate of quinia was added, and a drop observed under the microscope, a perceptible effect was noticed. A few were less active, and a few were dead. When the sulphate was added in the proportion of eight ten-thousandths all were dead, and repeated examination for four days after showed none living. The putrid odor was not affected. In other words the quinia was antiseptic, but not disinfectant. In quantities between those two extremes, the antiseptic effect seemed to be about in proportion to the quantity of quinia added, contrary to what I had been led to expect from the experiments of others. A quantity of bacteria were bred by putting into a fresh infusion of meat prepared in the usual way some of the sanious discharge from the nares of a patient suffering from malignant diphtheria. The discharge was swarming with minute life, whether peculiar to the disease or not I do not pretend to say, but they differed materially in appearance from any seen elsewhere. To this liquid three ten-thousandths parts of quinia sulphate was added and in a few minutes all the bacteria were dead, and none of those peculiar looking organisms, were again seen alive, though bacteria of the common type afterwards appeared there.

It required twelve ten-thousandths parts of qninia sulphate to kill the bacteria in a specimen of albuminous urine that had been standing about two days.

The other cinchona alkaloids tried, acted in the same way, but varied in the quantity of each required to do the work; it taking of sulphate of quinidia thirteen ten-thousandths, sulphate of cinchonidia fourteen ten-thousandths and of sulphate of cinchonia fifty ten-thousandths parts. Hence if we take their action upon bacteria as a measure of their antiseptic value the quinia would stand at one-eighth; quinidia, one-thirteenth; cinchonidia, one-fourteenth; and cinchonia, one-fiftieth.

It required to produce the same effect two-hundred ten-thousandths parts of salicylate of soda, eighteen of chloral hydrate, fifteen of strychnia acetate, and none of these had the slightest perceptible effect upon the putrid odor of the liquid. Forty-five ten-thousandths parts of potassium permanganate killed the bacteria immediately, and in a few hours destroyed the putrid odor of the liquid. Four hundred and ten ten-thousandths parts of the much talked of boracic acid killed nearly all in the strongly smelling infusion. At the end of twenty-four hours all were dead, and all unpleasant odor gone. The same effect was produced by three hundred and forty ten-thousandths parts of sulpho-carbolate of soda. Fifteen ten-thousandths parts of carbolic acid killed all the bacteria at once, and five days after none could be found living. A decidedly putrid odor was still perceptible. The only other reagents tried were hydrochloric acid, and chloride of zinc: eighteen parts of the former and fourteen of the latter being necessary to do the work.

Bacteria seem to require an alkaline liquid, and the addition of an acid sufficient to change the reaction of the liquid lessens their activity, and if added a little more freely is destructive to them. Hence, the topical use of any acid will act antiseptically. [It has been stated, however, by good authority that bacteria have appeared in small numbers in a liquid kept at an acid reaction.]

In this regard they are in direct contrast with fungous life.

In the treatment of diphtheria the question of our local applications, whether acid or alkaline, will depend upon whether we consider the disease of fungous or bacterial origin.

As bacteria thrive best when excluded from bright light, in a temperature of about 100° Fahrenheit, and in an alkaline liquid, we see that the blood furnishes just the conditions they require, and it is not surprising that in some diseases that fluid is swarming with them.

Taking Foster's estimate of the quantity of blood in the human body as one-thirteenth of the total weight, a person weighing one hundred and fifty pounds would have a little less than twelve pounds of blood, eight ten-thousandths parts of this is about sixty-seven grains, a not unusual quantity of quinine to be given within a short space of time, and it seems very probable that that amount would destroy any bacteria in the blood, provided that quantity could be present in the blood at one time. The same could be said of the other cinchona alkaloids, and perhaps of many other substances. From the foregoing we can make at least two deductions. First, that we possess certain agents, which, out of the body, will destroy bacteria. Second, that some of those agents are of such a character, and act in such quantities, as to suggest their internal administration to the human subject for that special purpose.

A WOUND OF THE ULNAR ARTERY: LIGATION OF THE BRACHIAL: SECONDARY HEMORRHAGE.

BY HARLAN J. BROWN, M. D. BROCKPORT, NEW YORK.

Frank Peck, age seventeen, on August 2, last, while bottling ginger ale, a bottle under fifty pounds pressure burst and a piece struck him on the fore-arm, making a lacerated wound of about two inches in extent and wounding the ulnar artery in the upper third of its course. He came immediately to my office which was directly across the street. Hemorrhage was controlled by digital compression of the brachial. I immediately sent for two other physicians and on consultation it was decided, on account of the nature of the wound and the depth of the artery at this point, to ligate the brachial at the place of election. I then cut down and tied the brachial in the lower third of its course, placing two ligatures, one on each side of a spouting muscular branch. The included piece of artery was not removed. The hemorrhage was nearly, though not completely, arrested. A graduated compress was applied at the seat of injury and a figure of eight bandage placed over that. Circulation was speedily established in the hand, the radial pulse being plainly perceptible the following morning. He had two slight hemorrhages the night following the operation, but both ceased spontaneously. About two o'clock on the morning of August 4, severe abdominal symptoms manifested themselves. Excessive pain and some apparent tenderness. Pulse 95, temperature 99.5° in the mouth. I diagnosed intestinal colic due to a considerable quantity of ice taken the day previous. I gave him fifteen grains each of calomel and rhubarb, followed in two hours by an half ounce of castor oil and directed only liquid food, and that to be taken hot. The pain was relieved by morphine hypodermically. His parents being much alarmed (as some one had whispered lock-jaw) called in consultation Drs. Moore, of Rochester and Townsend, of Bergen. The former agreed with me in my diagnosis and endorsed my treatment, but the latter was inclined to regard it as symptomatic of tetanus, especially as there was apparently considerable tenderness of the psoas and iliac muscles. The cathartic acted thoroughly the following afternoon and his symptoms were speedily relieved and he was permitted to take his customary diet. On August 8 he was about his room. On the 9th, while straining at stool secondary hemorrhage came on at the point of injury. I was immediately notified but before my arrival he had lost a large quantity of blood. The tourniquet was applied to the brachial, and two other physicians were summoned. I determined with the consent of the physicians present, to try acupressure before resorting to the more certain but less desirable operation of ligation. Three needles were inserted in different situations but with the result of only partially arresting the hemorrhage. I then enlarged the wound, turned out the clots and sought the wounded artery. Considerable difficulty was experienced in finding it among the mass of disorganized tissues. It was at last isolated and found to be only a partial solution of continuity. A ligature was applied on each side of the injury and the included piece of artery removed. A drainage tube and three stitches were inserted in the wound and a simple bandage applied and he was again confined to his bed. The wound suppurated freely on the third day, when the drainage tube and stitches were removed and the wound was syringed out with warm water thoroughly inpregnated with castile soap to which a two and one-half per cent. solution of carbolic acid was added. It was dressed in the intervals of washing by simply laying the arm on several thicknesses of linen which had been previously thoroughly carbolized. The wound united kindly without any unfavorable symptoms. The ligatures came from the brachial on the 16th day, and from the ulnar on the 9th day. There was some considerable muscular rigidity of the forearm for some weeks after the wound had healed, but at present he experiences no difficulty whatever.

A CASE OF AMPUTATION FROM A SPRAIN.

BY O. O. McKEE, M. D., CALDWELL, OHIO.

H. B., age twenty-three, on New Year's day, 1880, fell while coming down a stairs with a sack of wheat on his shoulder, producing a sprain of the left ankle, which at times gave him considerable pain. He continued to walk on it until November, 1880, when he fell and sprained it a second time. He immediately took to crutches and uses them up to to-day.

I was asked to visit H. B. by a friend, merely to see a man, who had been pronounced by a number of doctors to be beyond all hopes of ever having anything done for him, which would make him anything else than a pitable object and a source of annoyance to his friends. My attention was first attracted by a cough, and on further investigation I found quite a large cavity near the apex of right lung. Temperature 101° Fahrenheit.

On asking to see his foot I found a shapeless mass, perforated by a number of sinuses, the toes forming a straight line with the leg. By the use of the probe I could come to no other conclusion than that the tarsal bones with the lower end of tibia were ulcerated. And on examining the bones after amputation I found the lower ends of the tibia and fibula with the astragalus in an advanced stage of ulceration. His conditions being such, a married man depending on his father for support, requiring a second party to care for him, and the great drain his system had to bear from his diseased leg and foot, in the midst of professional and non-professional opposition, I recommended amputation, he being willing to undergo anything for a chance.

On the 29th day of November, 1882, I amputated the leg four inches below the knee. To-day, December 18, 1882 finds him able to be about the room on crutches. I had union, I am proud to say, by first intention. The entire amount of suppurating discharge did not exceed two fluid ounces. The stump can be handled with impunity, and presents a nice appearance. Temperature never went above 101 1-5° Fahrenheit. Pulse, 105. And since the operation he has been entirely free from the fits of coughing which used to harrass him so before the amputation.

PROPOSED MEDICAL BILL TO REGULATE THE PRACTICE OF MEDICINE IN MICHIGAN.

BY G. W. MALLORY, M. D., LOWELL, MICHIGAN.

SECTION 1.—The people of the state of Michigan enact: That from and after the passage of this act no person shall practice medicine or surgery, or any branch or department thereof, or profess to practice in this state without first exhibiting his or her qualifications by a legal diploma issued or granted by some legalized medical institution or college in the United States or in any other part of the civilized world.

SECTION 2.—Those who are now practicing medicine and surgery in this state without diplomas from some legalized medical college shall appear before the medical faculty at Ann Arbor to be examined in the various branches of medical science as taught in the medical department of the University of the state of Michigan, and if found qualified to practice medicine and surgery to receive a diploma, the same as is issued or granted to regular medical students.

SECTION 3.—The medical faculty of the University shall meet the first Tuesday in the months of April, June and September, for the purpose of examining all persons who have practiced medicine or are practicing medicine and surgery in the state of Michigan without legal authority, and no others. Said faculty shall examine the candidates in each of the several branches of medicine and surgery as taught in the University of Michigan, and if said medical faculty finds him or her qualified to practice medicine and surgery, then they shall issue or grant a diploma, the same as is issued or granted to regular medical students.

Section 4.—Each candidate shall pay the sum of ten dollars, which shall go into the general fund. Each candidate shall also pay each professor of the medical faculty five dollars, which shall be the fee of examination.

Section 5.—It shall be the duty of every legalized medical practitioner of this state, of whatever color, race or sex, to first register his or her name, and giving age, sex, nativity, and place of residence, and where graduated, in a book kept by the county clerk of each county. Said book to be made in accordance to plans made by the State Board of Health. Said book to be printed by the state printer, and the cost of printing and binding to be paid for out of the general fund. Said county clerk shall, on the first Monday of January of each year, report the names of all practitioners registered in the county to which he belongs to the secretary of state. The county clerk shall receive from each person so registered as above stated the sum of twenty-five cents.

Section 6.—Whoever violates the provisions of this act shall forfeit the sum of one hundred dollars, or be incarcerated in the county jail for the space of six (6) months.

Section 7.—It shall be unlawful for any person to make it a business to practice medicine in its various branches, or receive pay therefor, except there shall be in the office of the clerk of the county in which the practice is performed a record of such person as a practitioner in accordance with the several sections of this act.

Section 8.—Any person who has not first complied with the various sections of this act shall, upon conviction thereof, be deemed guilty of a misdemeanor, and be liable to a penalty in any sum not exceeding.........dollars and to imprisonment not exceeding.........years.

Section 9.—This act to take effect six months from the time of its passage.

EDITORIAL BRIEFS.

The renewal of subscriptions is now in order, and we most respectfully request that the matter receive immediate attention.

Professor C. H. Stowell, of the University of Michigan, has been dangerously ill with cerebritis, brought on by the use of the microscope, with high powers, by artificial light; but his physicians now pronounce him out of danger.

THE New York Post-Graduate Medical School has thus far met with gratifying success. The second term opens January 8, 1883, and continues until April 28, without intermission. It is hoped that, with its enlarged accommodations, improved facilities for instruction and increased corps of teachers, it will meet with still greater success.

DOCTOR OF MEDICAL SCIENCES.—The question of establishing a degree in medicine higher than M. D. is now being discussed in France, and it is rumored that Post Graduate Medical Schools of New York will probably confer some such a degree. We are sorry to see such a move. The degree M. D. is, or should be, sufficiently honorable. Let us make this degree of more value rather than create a new one. Two post graduate schools, or polyclinics, have been started in New York, and another is being organized in Philadelphia. One of the most promising features in these schools is that they do not confer degrees, and may they never degenerate into diploma mills as they surely will if they are empowered to confer a degree. It is said that there is a need for a degree to honor those who have made special contributions to medical knowledge. But a sufficient number of honorary degrees is at the disposal of our Universities and they have never been slow to thus reward merit in medical and other scientific men. Have not both Cambridge and Oxford thus honored the Nestor of American Surgery, Professor Gross? Did not Leyden confer as one of its highest honors the degree of M. D. upon Charles Darwin? We have enough degrees and do pray let us not multiply them. To create a medical degree superior to M. D. would be sure to cheapen the latter, and anything that would lead to this would be detrimental to the best interests of the profession. The time was when the title "doctor of medicine" indicated that its possessor was a man of learning and broad culture. Let us return to those times.

SOME OF OUR CONTEMPORARIES.—The first number of the *New York Medical Journal*, as a weekly, has reached us brim-ful (twenty-eight double column pages) of valuable information. This "old, reliable" journal is "off" only on one point; that is in its support of the new code.

We have also received the first number of the *Weekly Sanitarian*. It comes in an elegant new dress, and under the management of a pioneer in sanitary science, Dr. Bell, will continue to give us instruction in health matters.

The *Louisville Medical News* has been increased to sixteen pages and is now one of the best of our weeklies, especially since it has kidnapped one of our editors, Dr. Octerlony, and made him a frequent contributor to its pages.

The *Sanitary News*, of Chicago, is meeting with unexpected success and is worth many times the subscription price, $2.00 per year. Address G. P. Brown, 144 Monroe Street, Chicago.

The *Atlanta Medical Register* is much improved under its new management, and is now one of the ablest medical representatives from the sunny south.

The editors of the *Annals of Anatomy and Surgery* may justly be proud of their journal and of the position which it has attained. It is the only English journal devoted exclusively to anatomy and surgery, and we feared when our friends first made the venture that financial failure would be the result. We were fully acquainted with the ability and zeal of some of its editors to know that an excellent journal would be produced, but we feared that the demand would not be sufficient. But we were agreeably mistaken. The *Annals* has secured a permanent footing and is creditable to American surgery. The list of contributors for the present year guarantees that its present honors will not only be sustained but increased.

WOMEN AS PHARMACISTS.—The *American Pharmacist* takes strong ground against women entering the profession and says:

"Of those women who have graduated in pharmacy, not one is credited with following her profession. They marry or else they become physicians, and therefore, if such be the case, what is the use of their studying pharmacy at all?"

The *New Idea* takes exception to this, holding that woman, on account of her exactness, neatness, quiet attention and courtesy, is especially fitted for pharmacy. The editor of the *New Idea* wrote to Professor Prescott concerning the graduates in pharmacy, and received the following reply, which shows that the *Pharmacist* is in error:

UNIVERSITY OF MICHIGAN,
DEPARTMENT OF PHARMACY,
ANN ARBOR, MICHIGAN, December 11, 1882.

MR. FREDERICK STEARNS: *Dear Sir*—There have been women in nearly every class of the Pharmaceutical School since 1870, entrance having been granted them in the University departments in 1868. In the last five years three and one-tenth per cent. of the students in pharmacy have been women. Of the graduates in pharmacy (dating since 1869) three and five-tenths per cent, have been women. Nearly all the young women who entered have graduated. In college work they compare about equally with men, having some advantage in respect to earnestness and persistence.

Of the eleven graduates, two are in dispensing pharmacy; one studied medicine which she is now practicing; one is now in medical college; one is teaching in an academy; one is dispensing clerk in the University Chemical Laboratory; one is studying in the Department of Literature and Science; one died while prosecuting further scientific work; two married and have not been professionally engaged; and of one, of class of '82, I have no report. One had been engaged as prescriptionist in a hospital in New England before coming to the Pharmaceutical School. I have not known of any failure, or dissatisfaction of employer, in case of trial of women graduating with us, in any branch of pharmacy. But it is exceedingly difficult for them to find places in drug stores, unless they have relatives who are pharmacists and favor their employment. Pharmacists appear to dread to undertake the innovation, uncertain how it will affect patrons. Last winter I had a call for a graduate to take a place as a dispenser in a hospital for women, and I was unable to find one at liberty who could accept.

Very truly yours, A. B. PRESCOTT.

ORIGINAL INVESTIGATION.—Under this head, the *American Pharmacist* very justly makes the following complaint:

"While there is no lack of pharmaceutical ability in this country, still we are constantly dependent upon the authorities of Europe for all that is new and progressive. We know that our pharmacists have educational opportunities that are unexcelled, and yet we have no laboratories where systematic research is carried on. There are State institutions like the college of pharmacy of the University of Michigan, and other colleges, like those of California and Albany, which are sustained and supported by the influence and prestige of great universities; or again old and flourishing schools like our own college at New York, but they show no evidences of scientific progress in the way of original work. We are still, to our shame, it must be said, far behind the European authorities in the advances made by them in pharmaceutical chemistry. The University of Michigan is about the only school in which any attempt is made to produce laboratory work which shall be of some service to the world at large. The theses that emenate from that institution are a credit to the ability which directs the working of the college; but good as they are, how infinitely superior they would be, if our colleges would imitate the University of Dorpat, and vie with each other in efforts to produce such masterly pharmaceutical and physiological papers as those that form the laboratory communications of Professor Dragendorf, and with which he fills the *Pharmaceutische Zeitschrift für Russland.*"

It cannot be denied that but little attention is given in this country to original investigation, and is it not true that the medical journals are partly responsible for this. American medical journals will not, as a rule, publish any original investigations in chemistry or physiology. Editors claim that such articles "will not take" with readers. They want something for the "busy practitioner." Is not this "busy practitioner" a much abused person? Is not his mental calibre a little larger than the editor gives him credit for? Does he not, at times at least, have a faint desire for some true advance in knowledge? The complaint that we here make is more applicable in medicine than in pharmacy. A young man, who had done considerable original investigation, sent his paper of results to the oldest and best known medical quarterly in this country. The article was refused. It was then sent to an English journal and accepted with thanks. From the English journal it was noticed by some of the best German journals, but never a word of credit did it get from an American journal. Was not this sufficient to discourage the worker?

TRANSLATIONS.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.

BY RALPH D'ARY, M. D., ROMEO, MICHIGAN.

ATHETOSIS BILATERALIS IDIOPATHICA.

In a previous article I have expressed the opinion that athetosis may be idiopathic and is not always necessarially the consequence of hemiplegia. This opinion is shared by many physicians, and its correctness is again proved by the following case, who applied to me for treatment:

Solomon Burer, clerk, age twenty-two, has been affected eleven years. When born he was unusually large, and in early childhood he had an enormous head. It was a long time before he could sit alone, and although large and fleshy, he was weak and sickly. Toward the ninth year his head became proportionally smaller, and at last was of normal size. His health improved and he began to study. But learning was exceedingly difficult to him, for his memory and abilities were poor. In his eleventh year the patient first noticed involuntary motions in his right hand. These motions at first were quite insignificant, but gradually increased to such a degree, that he could no longer control his hand, and had to use the left hand for writing, or feeding himself, etc. Thus passed four or five years. When sixteen years old he noticed an involuntary flexion of the index of the left hand, which considerably interfered with the usefulness of the hand. Later all the other fingers began to contract, especially when engaged in finer work or holding small objects. In the right hand there were no contractions, but the involuntary movements continued as before.

In the course of time these symptoms gradually increased, in spite of prolonged and varied treatment. He had used various baths and electricity. Two months previously to his coming to me he had applied at the Hebrew Hospital, where extension of the left median nerve had been performed on him. This operation stopped the involuntary motions, but only for eight days. Then they returned, and his arm and hand had grown thinner and weaker after the operation.

The patient is well built, but poorly nourished, lean and flabby. The head is of normal dimensions. The face is normal. The tongue, when protruded, comes out straight, but trembles very much. Sight and hearing are normal. His speech is rather fast and slightly indistinct. He states that for some years past he occasionally stutters, especially when excited. There is slight tenderness on pressure over the fifth dorsal vertebra. Both hands twitch spasmodically, especially the right one. The fingers of the right hand are free,—of the left, half flexed. No effort of his will can stop the spasmodic motions of his hands and fingers. But during sleep, and for ten or fifteen minutes after waking his hands are quiet; when hanging down the hands are also quiet. The muscles of the hands are firm and tense. The left hand is warmer than the right. The patient states that in winter his hands look purple and are covered with cracks. Sensation and reflex action are normal, in general, but mechanical irritability is increased in both hands, so that the contractions resulting from slight tapping with the percussor are much exaggerated. Faradic and galvanic irritability are quite normal.

The patient was treated by galvanism for some time, but, as might have been expected, without success.

At the first examination of the patient, or on reading the above description of his case, one might think of three diseases (besides athetosis), namely—chorea, paralysis agitans, and multiple sclerosis. But on closer consideration it becomes apparent that the sum of symptoms does not fit any of the above three spasmodic affections.

The diagnosis between chorea and athetosis is, shortly as follows: (1). chorea does not usually attack the extremities alone, but also the trunk, the face, the head—in general the whole body. In our patient the spasms were limited to the fingers only. (2). The motions of chorea are irregular, disorderly, and rapid—in our case they were uniform, quiet and slow. (3). In chorea one of the principal symptoms is a disturbance of coordination, and an increase of the motions when muscular action is intended—in our case coordination was perfect and the motions did not increase on attempting to use the muscles. (4). In chorea the muscles are not firm and tense (or rigid)—in our case they were distinctly so. We see therefore that our case was not one of chorea.

In paralysis agitans and disseminated sclerosis the main symptom is the trembling. In the first of these disorders it is constant, but ceases when muscular action is intended; in sclerosis, on the contrary, it only becomes manifest when the muscles are called upon to act. Our patient showed neither the one nor the other. His twitching was constant, in varying degrees of intensity and in various positions of the hand, and it did not cease when moving the fingers. Neither had he the other symptoms of paralysis agitans or sclerosis—the trembling of the head, the scanning of the speech, the characteristic external appearance.

Thus by way of exclusion do we arrive at the diagnosis—athetosis. But we have also one direct symptom—as stated, the twitching was more severe in the right hand than in the left. Besides that he had also involuntary contractions in the left hand, not constantly, but only when the hand and arm were extended. These contractions or flexions yielded readily on the application of passive extension. In other words we have here the intermittent contractions of Oulmont. They are a fundamental symptom of athetosis, and finally decided me in diagnosing the above case as one of athetosis.

About the etiology of our case nothing positive can be said. In the patient's anamnesis there are no disorders that could be connected with the subsequent development of the disease. Hemiplegia is out of the question, simply because the patient is affected bilaterally. The only circumstance which attracts attention and may give rise to some hypotheses is the statement of the patient's mother, that in childhood he had an enormously large head. Was it hydrocephalus? To answer this at the present day is impossible, and now his head is of normal shape and size. This latter circumstance does not, however, necessarily exclude the possibility of early hydrocephalus, and this disease has already been recognized as an etiological momentum of athetosis by Francis Warner. In *The Brain*, 1881, he describes a case of undoubted hydrocephalus, in which the head had a circumference of one hundred and two centimeters instead of the normal fifty-five. This patient had athetosis. But whether this connection between hydrocephalus and athetosis, established as it is on the basis of the solitary case of Warner's patient, is premature, or not, the fact remains that my case of athetosis was not preceded by or complicated with hemiplegia. Warner also describes four cases of athetosis without hemiplegia. His first case was a little girl, who had epileptic attacks when six months old. These attacks gradually merged into athetosis. His second case was the one just mentioned, with hydrocephalus. The third was a little girl, who was apparently quite well in other respects, but who from birth had the motions of athetosis. The fourth was a boy who up to his tenth year, had been quite well, had attended school, etc. At that age athetosic motions first began in his face, then in the fingers of the right hand. Finally loss of memory and other psychic disturbances set in.

Other authors describe cases of athetosis without hemiplegia.

Thus on clinical grounds the idiopathic development of athetosis must be acknowledged as an established fact. No manner of treatment has yet been at all successful.—V. C. Greidenberg in *Vratch.*

MEDICAL EDUCATION.

The number of years that a student has to spend at a medical institution prior to being admitted to examination for a medical degree, in various countries, is as follows: Sweden, ten; Norway, eight; Denmark, six and seven; Belgium, Holland, Italy and Switzerland, six; Russia, Portugal, Austria and Hungary, five; France, England and Canada, four; United States, three or two; Spain, two.—*Vratch.*

TURNING GRAY SUDDENLY.

The possibility of the hair of the head turning gray suddenly (say in one night) is categorically denied by many savants, and especially by Kaposi, whilst it is as positively maintained by other substantial authorities, including Professor Charcot. Lately, Professor Raymond communicated an occurrence of this kind, which he had observed personally, and in company with Professor Vulpian. A dark haired lady of thirty-eight years of age had suffered great loss in a monetary speculation. This affected her very keenly, and in consequence of the moral shock she was attacked with severe neuralgic pains in various places, but especially in the scalp. The pains began on the 27th of January. Quinine, morphine, aconitine, and bromide of potash gave no relief. On the first of February, at 2 o'clock, A. M., the pain in the scalp became intolerable. The hair at that time still had its usual color, but by 7 o'clock the hair remained black only behind and over the temples. Everywhere else the greater number of the hairs had turned red, while the short hairs had turned gray. The scalp-hair only had changed, the hairs on the rest of the body retaining their usual color. After the change of color had taken place the pains still continued for several hours. She was then given ten grams (one hundred and fifty grains) of potassium bromide in the course of eight hours and the pains gradually abated. In the evening of Februbary 1, there were hardly any black hairs left, and on the next day the red hairs also turned gray and began to fall out in profusion. The patient recovered but became perfectly bald.—*Revue de Méd.*—*Vratch.*

ANCIENT SURGERY.

Dr. Tillmanns furnishes some curious data on prehistoric surgery, which he has obtained by observing marks on the bones of the stone period, and comparing them with the operations practiced by modern savages on the Australian and South Sea Islands, and the Esquimaux. In skulls of the stone period, found in France, Germany, Italy, Portugal, Peru and other countries there are holes made undoubtedly by trephining, either on the living subject, (chiefly children) or after death. The South Sea Islanders to this day trephine not only the skull but also the bones of the extremities (in rheumatism) by means of stone knives and pieces of Flint or glass. Rodze saw among the Australian savages a girl, from whom both ovaries had been removed by means of a stone knife, in order that she should not conceive; he also saw one deaf mute woman who had been thus castrated. In order to lessen the number of children, the Australians allow but the three handsomest men out of every hundred to remain in their normal condition. In the others, before puberty, the lower wall of the urethra is cut open by means of a stone knife, and to prevent the wound from healing together, a bone is inserted. The Esquimaux know how to produce abortion, by piercing the membranes with sharp bones especially made for the purpose.—Allg. Wien. Med. Zeit.—*Vratch.*

A WONDERFUL PYRETIC.

Professor Filehne recommends a new pyretic, which in his experience promptly controlled fever in various chronic and acute diseases. It always acts in the same manner and time. Its effect is especially good in croupous pneumonia; in malarial diseases the author has not yet tested it. The remedy is cairine (kaïrine?) or oxychinolinmethylhydride—$C_{10} H_{13} NO$—a crystalline grayish yellow powder, freely soluble in water, of bitterish salty taste and aromatic odor, which latter is generally so disagreeable to patients that the Professor administers the remedy in wafer-paper. The author has experimented with cairine in Professor Leube's clinic and finds that by means of it, *the temperature may be lowered to any desired degree, even below the normal, and may be held there, without any unpleasant consequences,* the patient, on the contrary, experiencing great relief and comfort. The urine assumes a dark green color, but contains neither sugar nor albumen, and the patient is bathed in perspiration during the time that the temperature is being lowered. But as soon as it is allowed to remain stationary, the perspiration ceases. When the cairine has expended its effect the temperature rises again, and the rise is preceded by a chill which is sometimes very severe. The author has not experimented on children. To adults he gives 0.3—0.5 gram every sixty or ninety minutes. The largest dose is one gram, and the intervals between doses not exceeding 0.5 gram should not be longer than one and one-half hours; between doses of one gram not longer than two and one-half hours. The *longest* time of action for one gram is three hours; for 0.5 gram, two and one fourth hours. After the first dose of 0.3—1.0 gram the temperature falls one-half to two degrees (centigrade?) and when taking 0.5 gram every hour the temperature becomes normal after the second, third, or fourth dose, and may be maintained normal without any ill effects.—Berl. Klin. Woch., November 6.—*Vratch.*

[The new antipyretic—resorcin—to which attention had been called in this magazine, and which since has been found much more valuable in other directions, must certainly be accounted inferior to cairine, if further experience confirms Professor Filehne's statements. For whilst resorcin effects a lowering of the temperature at the cost of so severe a cerebral disturbance that the patient's friends are terrified, cairine produces only a temporary perspiration which in itself, in some cases, may be useful in helping to bring about a favorable crisis of the fever. Cairine, if as represented, must be considered a remedy of incalculable value.]—D'ARY.

Translations from German Journals for THE PHYSICIAN AND SURGEON.

BY VICTOR C. VAUGHAN M. D.

PHYSIOLOGICAL ACTION OF THE BROMIDE OF CONIUM.

Prevost (*Arch. de Physiol.*) comes to the following conclusions from an experimental study of this drug:

(1) Paralysis from the bromide of conium results from its effects upon the motor nerves, whose irritability is destroyed.

(2) If the blood vessels of the posterior extremities of a frog be tied, and then the drug injected, these parts will remain unparalyzed; while the anterior part of the body is affected.

(3) In this way, the action of both strychnia and conium can be demonstrated on the same animal.

(4) The vagus is affected more quickly than the other nerves, and also regains its normal condition sooner.

(5) The secretion of the urine, saliva and tears is increased by conium.

(6) The conium is excreted in the urine. The urine of a cat, which had been poison with conium was evaporated to a syrup, and portions of this were injected under the skin of several frogs, in all of which it produced characteristic symptoms of conium poisoning.

(7) The secretory nerves preserve their irritability and augment the secretions simultaneously with the loss of irrita-

bility of the vagus and muscular nerves. However, electrical irritation of the cervical sympathetic and of the chorda tympani arrests the secretion of the saliva. Peripheral irritation of the nerves of the arm induce free perspiration of the palm, when muscular contraction cannot be produced. The same is true of the nerves of the foot.

(8) In the warm-blooded animals, if artificial respiration be resorted to, the heart continues to beat.

(9) It is doubtful if the nerve centers are at all affected by the poison; for in warm-blooded animals the convulsions were wholly due to asphyxia, and were relieved when artificial respiration was practiced.

(10) The irritability of the muscular substance is not effected by the drug.

POTASSIUM BROMIDE ACNE IN AN INFANT FROM ADMINISTRATION OF THE DRUG TO THE MOTHER.

Professor Kaposi (*Anzeiger der k. k. Gesellschaft*) reports the case of an infant, nine months of age, who had a well developed potassium bromide acne after the drug had been administered to the mother fourteen days (one hundred and twenty grams in all). On discontinuing the drug, the acne disappeared.

PHYSIOLOGICAL ACTION OF UREA.

Richet and Montard-Martin (*Gaz. de Phar.*) give the following conclusions after an experimental study of this question:

(1) Urea is very harmless. Intravenous injections of fifty grams in dogs of medium size were not fatal.

(2) Endeavors, not altogether satisfactory, were made to ascertain the per cent. of urea in the blood one-half hour after the injection of the above mentioned dose. When nephrotomy had been performed, about one-eighth part of the injected urea could be found in the blood. From this it is evident that the urea rapidly passes from the blood into other fluids and into the tissues. They found the gastric juice containing 1.5 of per cent. of urea, the saliva 0.5 per cent., and similar amounts in the lymph and parenchymatous fluids.

(3) Injected urea is slowly eliminated through the kidneys.

(4) A very remarkable, but not easily explicable fact was that while the diuretic effect of the injected urea was very marked, the per cent of urea in the urine was diminished. On this point all the experiments agreed.

(5) Animals into which these injections have been made and whose ureters have been tied, die sooner than animals upon which nephrotomy, without injections, has been performed. The former died within from sixteen to twenty hours, while the latter generally lived forty-eight hours.

THE EFFECT OF WORKING IN TOBACCO FACTORIES UPON MENSTRUATION, PREGNANCY AND LACTATION.

Since it has been observed that tobacco, and especially nicotine, increases the peristaltic movements of the intestines, some have supposed that it would have a similar effect in stimulating the muscular fibres of the uterus. So much has been said on this subject that the French minister of finance requested certain physicians to report as to the health of women employed in various tobacco manufacturing houses.

Dr. Lallement, of Nancy, during seven years practice among the female employes in a tobacco house, has observed no effect of the tobacco upon the sexual organs.

Dr. Piasecki, of Harve, gives statistics concerning five hundred and forty employes. Of this number, four hundred and eighty-nine were of proper age for menstruation. Of these, three hundred and twenty-eight presented no irregularity. In some of the remainder the flow was too copious and in others too scant. Of the one hundred and twenty-eight married women, twenty-eight had aborted, the total number of abortions being forty-seven. Of these, the cause was unknown in thirty-five cases; in the remaining twelve, it was due to physical causes, as falls, etc. Of the three hundred and seventy-six children, which these women had borne since they began work in tobacco, two hundred and twenty-three had died. One hundred and two died in consequence of intestinal diseases; of these, eighty-three had been fed upon artificial food. P. concludes that no evil effects upon the sexual organs can be ascribed to the tobacco.

Dr. Poisson, of Nantes, found only eight anomilies of menstruation among one hundred employes. Of sixty-eight women, eleven had aborted, and in seven of these the abortion could be accounted for by causes outside of their employment. P. found that the women were frequently ill for the first few days after beginning the work, as one sickens while learning to smoke, but after that time their health is good.—*Schmidt's Jahrb.*

THE GLYCERINE TAMPOON IN GYNÆCOLOGICAL THERAPEUTICS.

Dr. Hüllmann gives his opinion of the value of the glycerine tampoon, after having used it for fifteen years. He thinks that its virtues are due mainly to its hygroscopic and antifermentative properties. If a pledget of cotton be soaked in glycerine, placed in the vagina, and pressed against the os, it will withdraw large quantities of fluid. This action continues according to the amount of moisture in the tissues, sometimes for twenty-four hours or even longer. In some cases, the withdrawal of the moisture goes on uninterruptedly; while in others it is now and then arrested. This may be kept up until sufficient depletion of the uterus and adjacent tissues has been secured. The secondary effect of the glycerine is increased fluxion in the uterus, vagina and adjacent tissues. Again the glycerine tampoon serves to keep the mucous membrane clean. From these causes result those changes which have been observed after the prolonged use of glycerine in different diseases of the uterus, vagina and pelvic tissues. Among these beneficial effects may be mentioned diminution in the size of the uterus, improved circulation through the tissues and consequent improvement in nutrition and the elimination of effete products.

This treatment is especially applicable in chronic metritis and catarrh or in case of ulcerated os and constant leucorrhœa. Under this treatment the enlarged and hardened organ becomes smaller and softer. The ulcers are kept clean and soon heal. The secretion of the thickened mucous membrane becomes smaller in amount and improved in kind. The atonic, enlarged uterus becomes smaller and firmer. The same is true of the relaxed uterus of the anæmic who have not borne children, and of the atonic uterus after birth or abortion. A few glycerine tampoons suffice to produce normal involution.

In *descensus uteri et vaginæ*, if not too marked or of too long standing, the most favorable results can be confidently expected from the glycerine tampoons; while in versions and flexions, their value can be only of secondary importance.

This treatment is also of benefit in vaginitis and vaginismus, especially when due to fissures, and the treatment may be a valuable adjunct in these conditions when they arise from dislocations of an enlarged uterus and consequent disease of the parts supplied by the nervus pudendus. The glycerine is of value on account of antiseptic properties also.

TREATMENT OF ANGINA PECTORIS.

Günzburg (*Wien. Med. Presse*) treats this trouble, when due to derangement of the cardiac nerves, with cold compresses over the heart. The beneficial effect is soon manifested by the diminution of the intensity of the impulse of the heart and by the disappearance of the pain. This treatment is especially applicable to the disease in young and growing persons.

In elderly persons the cold compresses are not so beneficial as warm applications, with small doses of opium and belladonna repeated every four hours. G. has never yet used subcutaneous injections of morphine in the region of the heart, but he is inclined to the belief that this may be found advantageous. As a preventative measure, gymnastics are recommended.

PROPERTIES OF FICUS DOLIARIA.

Dr. Moncoroo of Rio Janerio (*Jour. de Therap.*) makes a report upon this new drug, of which the following is an abstract: The plant is indigenous along the Rio-Janerio. If the bark of the tree be cut, a white, sweet sap exudes. This has long been used by the natives as a remedy for round worms. The fact that the juice contains a vegetable pepsin was first ascertained by Larte in 1875. It has been used as an application in ankylosis and in the hypohæmia intertropica. Dr. Peckolt has studied the juice and finds that it is acid in reaction and contains, in one thousand parts, fifty-seven parts of *doliarin*, the other solid ingredients being gums, wax, resin and sugar. If the juice be concentrated and extracted with hot absolute alcohol and filtered; on cooling, a white, flocculent substance, *doliarin*, is deposited. If ten grams of finely divided flesh be suspended in as much water, and a few drops of hydrochloric acid and ten centigrams of the doliarin be added, and the whole digested for twelve hours at 40° centigrade, the flesh will be reduced to a white pulp. If the filtrate be decolorized by charcóal and diluted with an equal volume of water, it will be found that it will not coagulate on the application of heat.

Picric acid produces a yellow precipitate, which is redissolved on the addition of much water. Experiments with various albuminous substances gave like results. In an acid solution the characteristic reactions for peptone were obtained. From these experiments we conclude that the juice of the ficus doliaria contains a vegetable pepsin identical with that of the Carica papaya.

NITRO-GLYCERIN.

Dr. Korczynski (*Wien. Med. Wochenschr.*) has made a thorough study of the physiological and therapeutical effects of the drug. The results of his physiological studies agree closely with those of Murrell. Therapeutically he used a one per cent. solution in doses of from one to four drops usually, and in exceptional cases of from ten to fifteen drops. One patient, who had previously been given small doses, took at one time thirty drops.

In six cases of bronchial asthma from emphysema, the drug delayed the attack, when taken at the beginning, for one quarter of an hour. If the attack had already begun, the administration of the drug was followed by less marked effects, but was still of benefit. In only one case, that of a man sixty years of age, with senile emphysema and chronic bronchial catarrh, was the drug without beneficial effect. Systematic administration of the drug, three or four times daily, without any reference to the attacks, brought permanent relief in four out of the six cases.

In true idopathic nervous asthma, the results were less satisfactory. Of thirteen of these cases, seven were not benefitted. In four the improvement was doubtful, and in only two was the result decidedly beneficial. In two cases of stenocardia in consequence of aneurism of the aorta, the drug acted promptly. The pain speedily diminished, and after the long continued systematic use of the drug, the attacks did not return.

In three cases of palpitation of the heart the results were entirely satisfactory. In two cases in which the palpitation was wholly nervous, the trouble entirely disappeared after several doses. In three cases with insufficiency of the semi-lunar valves, the palpitation was arrested each time by the administration of the drug in the beginning of the attack.

In six cases of angina pectoris, the attacks were relieved in all but one, which was accompanied by atheroma and degeneration of the muscles of the heart. As a prophylactic measure, however, the drug failed whenever the angina was due to any structural change. In only one case of purely nervous angina was a permanent cure produced. This was after the use of the drug for twenty-six days (first one drop and then three, thrice daily).

In a case of chorea minor, after the bromide of zinc had been used without benefit for eighteen days, the movements disappeared under the nitro-glycerin, and a permanent cure was produced in twenty-five days. During this time the body weight increased three kilograms.

In chorea major, tremor mercurialis and diabetes mellitus (each one case), the drug was used without benefit.

From the above K. concludes that in angina pectoris, whether accompanied by insufficiency of the valves, atheroma of the blood vessels, degeneration of the cardiac muscles, aneurism of the aorta, or it be a true neurosis, nitro-glycerin is of benefit as a sedative agent. But a cure cannot be expected from it only when the disease is wholly a neurosis. The drug is likewise of value in bronchial asthma from emphysema, also in nervous palpitation of the heart.

GURGUN BALSAM.

Vidal (*Gaz. des Hop.*) uses this agent in vaginitis and urethritis. In the former he employs tampoons soaked in a mixture of equal parts of the balsam and lime water. In urethritis he orders an emulsion of four parts each of the balsam and gum Arabic with forty parts of water and twenty-four of syrup. Half of this is to be taken before breakfast and the remainder before dinner, following the dose in each case with a glass of Malaga wine. After three or four days the pain subsides, the discharge diminishes, and a complete cure can be expected within two weeks. In vaginitis a cure can be obtained within six or eight days.

ULCERATIVE CERVICAL CATARRH DURING PREGNANCY AND ITS TREATMENT.

Skjelderup (*Tidsskr. f. prakt. Med.*) states that when a woman, who has passed through a former pregnancy or pregnancies without trouble, suffers from nausea and pain, the condition of the uterus should be examined. In many cases a chronic cervical catarrh will be found. This may have existed before the pregnancy and simply be aggravated during the time. If not treated it often continues to confinement and heals during involution, or it may remain unchanged. For treatment, S. uses the mitigated stick (equal parts of caustic and nitre). The stick must not be long enough to reach into the cavity of the uterus. As a rule, ten or twelve applications are sufficient to produce a cure. Daily injections of warm water (24° to 25° Reamur) may be used with benefit, and the external genitals should be bathed with warmer water. S. gives the details of three cases illustrating his statements. An abstract of one of them is as follows: A woman, twenty-seven years of age, in the third month of her second pregnancy, suffered from nausea, pain in the back, cold extremities and general uncomfortableness. An ulcer was found on the neck of the uterus, covered with a thick mucus. After five applications of the mitigated stick, all unpleasant symptoms disappeared, and the pregnancy then passed normally on to a favorable termination.

PHARYNGITIS ET LYMPHADENITIS RETROPHARYNGEALIS IN CHILDREN.

Dr. Herz (*Wien. Med. Wochenschr.*) finds chronic pharyngitis very frequently present in children. Sometimes the mucous membrane is hemorrhagic, or eroded or ulcerated. The children suffer, for the most part, from a short, broken cough. Older children complain of a roughness of the throat, or from the sensation of a hair in the throat. The cough is sometimes so great that it leads to vomiting. This condition of the throat is often accompanied by enlargement of the lymph glands of the axilla and inguinal region, and the children may be anæmic, scrofulous, tuberculous or syphilitic. This condition is seldom noticed before the third year. When found sooner it is due to unfavorable hygienic surroundings. In these cases, treatment must be directed to the general health. A flesh diet, wine and iron are useful.

H. reports ten cases of lymphadenitis retropharyngealis which he has observed. The children ranged in age from one to two and one-half years. Of the ten, only three appeared healthy. Three were anæmic and four scrofulous. The enlarged glands varied in size from that of a hemp-seed to that of a bean. In five cases they were situated on the right side; in four, on the left; and in one, along the median line. The affection is most prevalent during the months of winter and spring, and presents the symptoms of acute catarrh. Cold compresses and painting the neck with the iodide of glycerine were the therapeutical measures used.

POISONING FROM ALOES.

Stumpf (*Jahrschr. f. Ger. Med.*) reports the following: A woman, who menstruated irregularly, took for constipation, on March 7, five grams of aloes. Soon afterwards there was a sensation of heat in the heart and body, constriction of the chest, anxiety and nausea. After rest in bed and the use of a clyster, the symptoms disappeared. The woman went about her work again. On the afternoon of March 9, there appeared palpitation of the heart, want of breath, nausea, perspiration and collapse. The pulse was not perceptible, and a large quantity of blood flowed from the vagina. This condition continued until the next morning. The patient recovered after three weeks.

CLINICAL REPORTS.

GLEANINGS FROM PHILADELPHIA CLINICS.

Reported by MASON W. GRAY, M. D.

MEDICAL CLINIC AT UNIVERSITY OF PENNSYLVANIA.

BY WILLIAM PEPPER, M. D., LL. D.,

Professor of Clinical Medicine in the University of Pennsylvania.

DIABETES MELLITUS.

GENTLEMEN: This young woman is twenty-three years old, has been married about six months. She has a decidedly emotional nature. I have just learned from the resident physician that since her marriage she has noticed that she would become easily fatigued on slight exertion. She also observed that she was growing thinner; that she had increased appetite, great thirst, with a sense of dryness in the throat and a dry, harsh skin. Just now, and indeed for some time past, she has suffered much from excessive urination. She has passed in the last twenty-four hours six quarts of urine with a specific gravity 1031. She menstruates regularly, her bowels are costive, and her general digestive function is bad. Here we have a specimen of her urine just passed. We will apply Fehling's test to it. The proper way to do this, is to take a small quantity of the Fehling's solution, add about twice as much water, and boil, then add a drop or two of the suspected urine. You see as I add this drop we get no reduction of the sub-oxide of copper. But when I add a larger quantity we get a precipitate of the sub-oxide. Now let us try this experiment again. You see now in repeating this test with perhaps more care, the addition of a drop of urine forms a precipitate. The quantitive analysis for sugar has been made and the urine found to contain 6.6 per cent. of sugar. Here there can be no possible doubt of the diagnosis, and, indeed, most cases of this disease are easily diagnosed, though sometimes there may be doubts. The great thirst and excessive amount of urine voided, followed by the increasing failure of strength, the loss of flesh; and especially is the debility remarkable in being greater than the loss of flesh and amount of food ingested can account for.

The early symptoms are usually the loss of energy, gradual failure of strength and emaciation, followed sooner or later by the thirst, increased excretion of urine, etc. These characteristic symptoms are nearly always present. But occasionally you will see patients who do not present all of these, and cases which vary greatly from the typical form. I have seen cases where the patient did not complain of thirst and frequent urination, but simply of loss of flesh and strength. It is in such cases as these that you will be troubled if you have not formed the habit I have so frequently urged upon you of always making a systematic examinatian of the urine, especially when your diagnosis is not perfectly clear, or you have debility and emaciation which are unexplainable. In these cases you will frequently find sugar or albumen. Other cases will come to you with symptoms referable to the nervous system such as restlessness and vigilance at night, and all this before there is any excessive urination or loss of flesh and strength apparent. The patient will tell you he cannot sleep at night and thinks it is due to over-work. In all such cases the urine should be examined and in many of them it will be found to contain sugar. I dwell on these cases of masked diabetes because it is so easy to overlook them, and because it is so necessary that the disease be recognized in its early stages. It is remarkable to find diabetes in so young a person as this patient; still we find it in all ages. This disease occurring in young persons is more grave than in older patients, probably because it is most apt to occur in young persons who have a tendency to phthisis or who present a history pointing to inherited tendency to the disease. The great danger in all cases of this disease is from exhaustion and general wasting of the whole system, or of the intercurrence of phthisis when the disease runs a much more rapid course.

There is usually more or less disturbance of the circulation. Now I have not seen this patient before and have not investigated with reference to this. On inquiring, you hear what she says. She has but a slight feeling of numbness in the extremities, but often there is a sensation of numbness—a feeling of needles and pins being stuck into the arms and legs. This symptom I class among the nervous phenomena of the disease. It is due to the influence of the vaso-motor system.

In regard to causation I think there is not always a clearly marked cause. You will find many causes mentioned in the books—exposure, intemperance, injuries to head, general nervous disturance and so on. There is supposed to be some hereditary tendency to diabetes, and I think there is no question as to the influence of anxieties, and emotional strain as having something to do with the etiology. We know very well that any irritation of certain parts of the sympathetic and spinal cord, and the floor of the fourth ventricle will cause diabetes, and I suppose that a functional irritation, as grief or anxiety, may produce the same effect as a traumatic cause.

Sometimes diabetes is associated with disease of the liver. We know that this large glandular organ has a very intimate relation with the assimilation of sugar, and yet I cannot say positively that any disease we ever saw, of the liver, was the cause of diabetes.

In this hospital we see every known disease of the liver, and diabetes has not been observed in connection with any such case yet. But there may be some hepatic disease yet undiscovered which may be connected with the pathology of this disease.

The pancreas is the seat of chronic diseases of various forms, and yet I cannot say that diabetes is connected with any one disease of the pancreas, however, this is a very important organ in its relation to assimilation, and comparatively little is known of its diseases.

Now it would be very desirable to make a prognosis. In this case the youth of the patient, duration of the disease, and in all cases, indeed, the emaciation and signs of organic disease are of more importance than the amount of sugar in the urine. I have seen large quantities of sugar disappear from the urine, and on the other hand, I have seen smaller quantities persist in spite of treatment, and further we are to be guided in making our prognosis by the effect diet and medicines have on the urine.

This brings us to the treatment. What shall we do for the patient? Her eyes are normal, tongue moist, flabby, pale, marked by the teeth. She has no cough. Pulse becomes rapid on slight exertion and is soft; no cardiac murmurs; no jaundice; there is no œdema and no albumen in the urine.

Now here we have a great loss of glucose, but we must put up with it. The more sugar or starch we give patients suffering with this disease, the worse they get. Hence one thing we must aim at in our treatment is to cut off all foods which contain sugar and starch, and whenever we do this they always get better. We should give the patient a list of articles he may eat. We may order for him animal food, such as meats, fish, etc., excluding liver. Give him green vegetables, eggs, soup and gluten bread. In fact here is a good opportunity for the exercise of ingenuity and culinary skill. If our patient is not too fastidious we can prepare for her a pretty good liberal living.

But sometimes we will find a patient who will fail in flesh and grow worse when restricted in his diet even though under this treatment the amount of urine will greatly decrease, and the sugar almost or entirely disappear. In such cases we must put the patient on a mixed diet and let him have sugar in his urine. I have in mind patients I have had who were robust and hearty, but when put on a restricted diet, would pass less urine, sugar would disappear, but they would grow paler, and weaker very rapidly, and when put back on a mixed diet, would at once improve, and moreover, some of these cases I have had opportunity of watching and have seen them grow fat after being placed back on a mixed diet, live healthy lives and die at a good age of some other disease.

So you see it will often be necessary to feel your way, as it were, in treating these cases. An article of diet which I have not mentioned is Koumyss, which is a fermented milk.

Now I consider this matter of diet in the treatment of diabetes to be much more important than the employment of drugs. We cannot by the use of any drug meet more than one indication, and the employment of medicine is almost entirely empirical. In some cases, though, we can see some definite indication, as, for example, when we determine the cause to be a specific tumor pressing upon the brain, then specific treatment would be indicated. But more often we cannot find anything definite, and as I said before, the treatment must be purely symtomatic. Hence it is we find a thousand remedies recommended for the cure of diabetes. We can scarcely look into a medical journal to-day without finding some of these many remedies recommended which have been highly spoken of now and for years back. Now each one of them may be good for some one symptom, but cannot be surely relied upon. We should attempt to remove any morbid cause which may be found in the general condition of the patient, and this will often require great skill and good judgment. To diminish the excessive flow of the urine, we have many drugs, the most efficient of which to my mind, are codeia, ergot, opium, bromide of potash, iron, and these are mentioned in the order of their relative importance. These remedies are useful in reducing the quantity of urine and some combine with this action a sedative effect. Codeia I like better than opium as by its use the digestion is less disturbed, and moreover, what we must always take into consideration in prescribing a narcotic, the opium habit is liable to be formed from its continued use.

Bromide of potash acts well in some cases, and I have known it to be lauded highly but in my experience I have not found it so very valuable. But always bear in mind it is of primary importance to relieve the nervous manifestations and correct any digestive disturbance, and if any of the remedies which are employed interfere with digestion, don't use them. With this patient we shall at once regulate her diet, place her in a way to improve her general condition, give her cod liver oil, and possibly skimmed milk. After this we will give her one-fourth of a grain of codeia three times a day, and if she will bear it and improve under its use, we will increase the dose.

SELECTED ABSTRACTS.

TREATMENT OF GOITRE.

Dr. Grunmach, of Berlin, has employed an arsenical injection into the parenchyma of the enlarged thyroid body in more than one hundred cases. The injection consisted of one part liquor potassæ arsenitis to three of water, This solution was made use of two or three times a week. The average total number of sittings was ten to fifteen. The evil effects sometimes seen after the use of iodine never once occurred with this arsenical preparation. The effect was to diminish the tumour, and to remove the obstruction to the breathing supposed to be due to the pressure on the trachea. The general health of the anæmic patients was much improved.—*Medical Times and Gazette.*

QUINQUINIA VS. QUININE AS AN ANTI-PERIODIC.

BY G. T. McKEOUGH, M. B., CHATHAM, ONTARIO.

Quinquinia is a preparation said to contain fifteen per cent. of quinine, the remainder of the preparation consisting of the other alkaloids of cinchona bark in their natural combination: quinidia averaging fifteen per cent., cinchonidia fifteen per cent., cinchona, twenty-five per cent., chinoidine thirty per cent., and for which is claimed therapeutical properties equal to quinine, "grain for grain," with certain material advantages, namely: the absence of symptoms of quinism during its administration, and the cheapness of the drug as compared with quinine. The specimen of the preparation which my partner, Dr. Holmes, received, has been administered by us to twelve patients. A short record of the results I thought might be interesting to the profession, especially to those practicing in malarious districts who have not as yet given it a trial.

Number I.—F. W., male, aged forty-four. Had general malaise with loss of apetite and high colored urine for several days, but continued following his usual occupation until the morning of the fourth day of his not feeling well, when he had a heavy chill followed by a fever, headache and pains in his limbs and back; he was compelled to go to bed and sent to me for a bottle of ague medicine. I sent him twenty grains of quinquinia to be divided into ten powders, and one to be taken every two hours, with a purge of rhubarb and calomel. On seeing him a few weeks afterwards he informed me that the medicine had cured him; that there had been no return of the ague; and he was glad I had "at last found a medicine that would cure ague without having any quinine in it," the quinquinia not producing the usual symptoms of cinchonism which quinine always produced in his head to a marked degree.

In a malarious district one not infrequently meets with cases similar to this, in which without the administration of any anti-periodic there is no return of the paroxysm, the malarial poison seeming to be eliminated after a single attack, apparently spontaneously. This might have been such a case and no credit due to the quinquinia for the favorable termination of the disease.

Number II.—September 12. A. M., female, aged fifty-six. Has had tertian ague for a week past, in all, four paroxysms. Prescribed thirty grains of quinquinia—three grains every two hours. She commenced to take the medicine at one o'clock upon the fourth apyrexial day of the attack, the fifth paroxysm was expected the following morning about ten o'clock, but she escaped it, the remedy having been taken regularly as directed. We could scarcely expect more from quinine, probably a smaller quantity would have produced the same result. The ague returned in a fortnight, when thirty grains of quinine were ordered and broke it, quinquinia not being obtainable, our supply having become exhausted. She had no return of malarious symptoms when last seen, one month after her last attack. Whether quinine has superior prophylactic properties to quinquinia in malaria, my experience with the drug is too limited to state. This case would favor quinine as giving greater immunity to subsequent expressions of malaria.

Number III.—F. J. G., female, aged thirty-seven. Was seen on the evening of September 13; complained of chilliness with headache, particularly over the left brow, pains in the limbs, no appetite, languid and tired. Temperature 101° Fahrenheit, pulse 100. The day previous she was quite well. Ordered thirty grains of quinquinia—three grains every two hours. When seen the following evening her symptoms had not improved; there was some relief from the pain during the morning, but it increased in severity during the afternoon. The quinquinia having all been taken, and my experience being so limited with the preparation, I did not feel justified in continuing its use any further. Knowing that quinine would certainly restore the patient in a few days to health, thirty-six grains of sulphate of quinine were ordered, and the patient was well in a couple of days. If I had had the same confidence in quinquinia as I had in quinine, and continued its use, the patient might have recovered as rapidly under the entire use of quinquinia, as it must be remembered that similar cases do sometimes require one drachm or more of quinine to effect a complete cure.

Number IV.—September 15. F. D., female, aged twenty. Two weeks ago had an attack of intermittent fever, for which she took thirty grains of quinine and recovered. Since then she has been taking liquor arsenicalis and liquor ferri dialyzati, having become somewhat anæmic from a succession of attacks of acute malaria. She has been feeling tolerably well since her last attack until this morning, when she lost her appetite, urine high colored, feeling of fatigue and languor, has chilly sensations. I saw her about three o'clock, when thirty grains of quinquinia were prescribed, to be taken in the course of the afternoon and night. She took the remedy faithfully, hoping to ward off the expected paroxysm, but without the desired result, as the following morning she had a chill with fever, and sent for some quinine, regretting very much that the other medicine did not cure her, as it did not make her "head ring and buzz," like quinine. She had no subsequent paroxysm after taking thirty grains of quinine.

Number V.—J. T., aged twenty-seven, male. Tertain ague. The usual symptoms, together with a foul breath and thickly furred tongue. Ordered thirty grains of quinquinia and a purgative. He returned to our office in three days, stating that he had no return of the fever, but his appetite had not returned, and he had a "bad taste in his mouth." He was ordered a mixture of rhubarb, bicarbonate of soda and infusion of calumba, and when I last saw him a few days ago, he informed that he soon regained his usual health and had no return of ague.

Number VI.—G. S., male, aged thirty. Has had attacks of malaria all summer. Came to our office on the twentieth of September, complaining of his bones aching, loss of appetite, fatigue and languor, inability to work, no rise of temperature. Gave him thirty grains of quinquinia, and on the second day after taking the prescription, he returned to work, feeling as well as usual.

Number VII.—September 27. L., aged eleven. Has been suffering from ordinary intermittent malarial symptoms for two days, with slight rise of temperature. Prescribed twenty grains of quinquinia—two grains every two hours, which produced some relief from the aching and slight lowering of temperature. The prescription was repeated and made a complete cure.

Number VIII.—September 27. Mrs. R.'s baby, aged two years. Has had ague every alternate day during the past week. Ordered ten grains of quinquinia—one grain every two hours. No return of ague.

Number IX.—G. J., aged sixty, male. Has had two paroxysms of quotidian ague. Thirty grains of quinquinia in four doses stopped the attack.

Number X.—September 29. C. C., aged thirty-two. Brow ague. Has had severe pains over his left brow every afternoon for four days. After taking thirty grains of quinquinia there was no return of the pain.

Number XI.—September 30. A. McC., aged twenty-four. Has been suffering from remittent fever for several days. Has taken two grains of sulphate of quinine every two hours since the beginning of his illness, in all about two and one-half drachms. The symptoms of quinism having become so distressing to the patient, I omitted the quinine and substituted two grains of quinquinia every two hours. He felt very grateful for the change, as "the deafness and buzzing in his ears" soon ceased. The fever abated on the second day after commencing to take the quinquinia, the ninth day of the disease. It is difficult, if not impossible, to determine the relative value of the two drugs in this case. I think it is doubtful if either the quinine or the quinquinia had much influence in arresting the disease, the case probably being one of those types of remittent fever, described long ago by Cleghorn in his work on the "Epidemic Diseases of Minorca," which terminate spontaneously on the ninth day.

Number XII.—T. R., aged nineteen, male. Complained that every other day for a week his bones ached, felt greatly fatigued and it was with difficulty that he performed his usual manual labor. He had no chills, and when I saw him on one of his sick days, there was no rise of temperature. Thirty-six grains of quinquinia—four grains every three hours—restored him to health.

I think I may safely say that from the results of its use in the above cases, it merits further trial. As a tonic I have no experience with it, but as an anti-periodic remedy I doubt not it will prove as trustworthy and as reliable as quinine, "grain for grain." On the whole, its limited use in our hands has been satisfactory. That thirty grains of quinquinia will cure an attack of typical tertian or quotidian ague there seems to be no doubt. Whether it will prove as useful in less typical and more obscure malarial affections, I do not know. One decided benefit it has over quinine is the absence of any of the unpleasant symptoms of cinchonism in the quantities in which we prescribed it, an advantage which will assuredly be appreciated by the quinine taking public. As to the mode of administering it, the preparation being of a gritty, sandy consistence, does not mix well with water, minute particles getting into the crevices of the teeth, causing the taste—which is intensely bitter—to be retained in the mouth for some time. If the patient can swallow a capsule or small wafer pellet, this will be found the preferable mode, otherwise rubbed up with pulv. acacia, elixir tarax. co. and syr. gaultheria, a not very unpalatable mixture is compounded. The remedy being apparently a useful one, especially so long as quinine remains as high priced as it is at present, it is to be hoped that the manufacturer will not permit of its adulteration.—*Canada Lancet.*

GLYCEROBORATE OF CALCIUM AND GLYCEROBORATE OF SODIUM.

Two new substances have been lately submitted to the French Academy of Sciences, by Dr. Gustave Le Bon, which, according to him, possess powerful antiseptic properties. They are freely soluable in water, perfectly inodorous, and so harmless that they may be applied even in a concentrated form to sensitive organs as the eye. Dr. Le Bon recommends them as powerful disinfectants, for preserving meat and other alimentary substances.—Paris Correspondent to *London Lancet.*

SOME OF THE CAUSES OF DENTAL DECAY.

The *British Medical Journal* of November 18, prints a paper read by Alfred Carpenter, M. D., before the Odontological Society. He remarks that ancient history tells us that dental caries was common among the oldest races regarding whom we have any records. But while it was then somewhat the exception it is now the rule.

Causes for the foundation of change: Inherited tendency will give rise to irregularities of shape, size, and arrangement, which are so constant that the new condition becomes almost natural. Both syphilis and gout have a special action on the teeth; so have other constitutional diseases that produce defective nerve action and feeble nutritive force.

Accidental damage or injury to fœtus or young child; defective muscular action; temporary causes in the form of corrosive medicines; adulterations in articles of food, are causes which may produce immediate effect, or develop sequences years after the cause ceases to exist.

The minute quantity of organic matter found in the enamel protects and preserves the life of the tooth. A necrosed tooth soon takes on decay.

The materials forming the hair and nails are excretions.

The same is true of phosphate of lime which makes the teeth, it is done with so far as the nutrition of the active organs is concerned. The phosphate is the sequence of the act of living, and no life can be carried on without it. Its presence is necessary for the changes which take place in cell-life. The presence of some salt of phosphorus is indispensible in cell-growth. When it is not provided the constitution suffers; the bones are soft and cellular, and the teeth defective. If phosphorus is given in excess when the lime salts are withdrawn the effect is much the same. Improper diet will produce abnormal secretions, these alter the fundamental condition of the body. The results of defective innervation of syphilitic progeny are seen in the imperfect character of the phosphate which harden the irony cells and the enamel membrane. The salt is not a pure phosphate, and the cells which it forms are changed in shape and diminished in number.

Tubercular tendencies favor caries. The protoplasm which forms the cell membrane is perverted. The organic portion of the dentine has a tendency to fatty degeneration, rather than to a proper deposit of phosphate salt. In time the defective cells soften, a small hole is the result, vibros and bacteria are then allowed to assault the tissues and caries follows.

These inherited tendencies show themselves on epithelial structure in early life, when the deeper organs are not yet affected. The teeth, the hair, the nails, and the epidermis, may all give evidence of taint, but in many children the teeth alone give such evidence. When the taint is syphilitic the teeth are notched and irregular: When tubercular they are not deformed, jagged and stained, but will be found thoroughly carious. Instead of true bone and true enamel, a fatty, friable material is provided. A gouty diathesis does not show effects so markedly upon the teeth in early life, but teeth of gouty men and women are more subject to decay. The future has to show whether the children of total abstainers have an advantage over those of non-abstainers as regards soundness of teeth.

TREATMENT OF EPILEPSY.

Dr. Saundby read a paper on the treatment of Epilepsy, before the Midland Medical Society, in which the following points were insisted on: (1) The value of combining the bromides of potassium, sodium and Ammonium, as recommended by Professor Brown-Sequard; (2) The advantage of adding digitalis, and sometimes theine, to the mixture to counteract the depressing influence of the bromides; (3) The utility of zinc as an adjuvant in the treatment; (4) The successful use of borax in some cases of obstinate epilepsy; (5) The value of theine, caffeine and nitro-glycerine in the treatment of epileptic vertigo.—*British Medical Journal.*

VIVISECTION IN MEDICINE.

In his introductory address at Saint Thomas's Hospital, London, S. J. Sharke, M. R. C. P., said: "What has really given medicine a claim to be placed among the sciences is the recognition of physiology as its basis; and what has given physiology itself precision is the experimental method of investigation. We do not for a moment assert that without vivisection there would be no physiology; but the irreconcilable opponents of the former cannot even be convinced of the great advantages which have resulted to physiology and to medicine alike from the practice of experimenting upon living animals. The fault, however, lies with the antivivisector, and not with us. The foundation of modern medicine is physiology; and one of the essential factors in accurate scientific physiology is experiment. To appreciate these propositions, one must first appreciate the facts and history of physiology and of medicine. But this cannot be done, though some insist that it can, by people who have little or no knowledge of these sciences."

ON THE PATHOLOGY OF JAUNDICE.

The *British Medical Journal* of November 4, prints a summary of a paper read by W. R. Thomas, M. D., at the annual meeting of the British Medical Association.

In most cases jaundice is caused by obstructed passages in the lobules causing secreted bile to be absorbed. It is rarely caused by the suppression of the secretion. Obstructions are caused by inspissated bile; gall-stones; parasites; diminution of tubes from thickening or contraction; pressure upon tubes by growths; tumours; fæcal accumulations. Non-obstructive cases are those due to congestion of the liver; fevers; certain poisons in the blood; atrophy; insufficient aëration of the blood; mental emotion.

In congestion it is produced by pressure of the swollen lobules causing stasis; even in atrophy it is not caused by suppression of secretions, but by diminution of tubes, and consequent reabsorption of the little bile that was secreted. Jaundice after severe mental emotion is probably caused by spasm of tubes and ducts.

Bile is not formed in the blood. Lehmann could not find it in the portal vein; and Frerich denies that it ever has been found in the blood. There is conclusive evidence that destruction of the liver tissue in the human being, or its extirpation in the animal, does not cause jaundice.

The liver is a blood purifier. The presence in excess, therefore, of any material, natural or otherwise, in the blood, tends to congest the liver. The treatment of this symptom will depend upon the views adopted of its pathology. If due to improper living, the habits of life must be corrected. Exercise is very beneficial. It produces an increased excretion of carbon. The accelerated circulation tends to relieve hepatic congestion. A small amount of mercury may be absorbed from applications of mercurial ointment, but the friction used in applying it is the prime factor in removing the inspissated bile and other obstructive matters, and relieving the congested lobules. Experiments show that mercury does not increase the secretion of bile when given to dogs. But whatever be its action when given to dogs in health, it certainly acts beneficially in many derangements of the liver, by causing the expulsion of great quantities of bile. The writer prefers giving one or two large doses to begin with, and knows of no remedy which acts so beneficially as the mixture composed of sulphate and carbonate of magnesia.

ANTISEPTIC INHALATIONS.

Mr. Hartigan of Hong Kong, writes a paper to *British Medical Journal* of November 4, narrating four cases of pulmonary and bronchial troubles, very satisfactorilly treated by inhalations.

Case I.—Man aged twenty-nine, left England on account of serious pulmonary symtoms. Lost forty-two pounds in eight months, profuse perspiration at night, chest, flat, dull on percussion coarse *râles*. Expectoration profuse, muco-purulent, offensive. Great dyspnœa. Temperature 102° Farenheit, pulse 130, respiration 40. In addition to general treatment, inhalations given. In four months, temperature, pulse, respirations, normal, all former symptoms disappeared.

Case II.—Gentleman aged thirty-two, after catching severe cold, lost weight rapidly. Severe cough, muco-purulent expectoration, fever, night sweats, dyspnœa. Mother and elder brother died of consumption. Right lung dull and crepitating. Two weeks of general treatment, weight increased nine pounds, but temperature, cough, and expectoration increased, cavity found near right apex, and left lung involved. Began use of inhalations. After eighteen days, temperature normal, pulse and respiration nearly so, night sweats stopped, expectoration very greatly diminished. Without permission inhalations were discontinued, when all previous symptoms returned. Resuming inhalations, symptoms disappeared. General treatment consisted of quinine and mineral acids; pills of belladonna, zinc, and nux, at night; iodine over chest; and milk in large quantities.

Case III.—Woman, after taking cold, pleuropneumonia followed, consolidation began to break up and form cavity. Expectoration, very purulent, viscid, exceedingly offensive, and abundant, giving traces of lung tissue, cough incessant. Three months' inhalations resulted in greatly diminishing cough, expectoration reduced to two drachms of frothy mucus. Other treatment consisted of chloride of ammonium and hydrochloric acid, with blisters.

Case IV.—Bronchial asthma of ten years duration; profuse expectoration, of greenish muco-purulent matter. All sorts of remedies tried without success. One month's use of the respirator completely checked the broncorrhœa. Every threatened attack is put off by use of the inhalations.

These cases as selected represent different types of disease, and the results confirm the theory, that by killing infectious bacteria the purulent secretions of cavities are rendered innocuous, destructive action is prevented, disease arrested, and tissue is finally repaired. The respirator is to be worn at night, and during the day at convenient intervals. Solution—carbolic acid one to twenty, to one in five of water.

DEATH OF A CHILD FROM CHLOROFORM.

Frank Sheare, M. D., reports to the *British Medical Journal*, the death of a child aged eighteen months, whilst under the influence of a limited quantity of chloroform. All the remedies and methods for stimulating and prolonging respiration were to no purpose. Previous to this case he shared the impression with most members of the profession that children have an "immunity from danger." He finds, however, that during eleven years, three deaths under five years of age, out of a total of seventy deaths from chloroform, were registered in England. The youngest child that has hitherto died from chloroform was two years of age.

A NEW HAIR DYE.

M. Naquet, of Paris, produces a new hair dye, which he claims has none of the dangers or disadvantages of those containing lead or silver. The base of the dye is bismuth. The metal is dissolved in nitric acid. To this liquor, a solution in water of tartaric acid, equal in weight to one fourth of bismuth used, is added, then a large quantity of water to insure thorough precipitation of the bismuth. Collect precipitate, and wash with water until washings have lost all acidity. Dissolve precipitate in solution of ammonia, using one fluid ounce to every ounce of bismuth used. Hyposulphite of soda, equal to three-fourths of the weight of bismuth, is then added. When the salt is dissolved, filter and preserve in well closed bottles. The preparation makes a progressive dye, producing all shades, up to dark chestnut, and is perfectly harmless.

CONTAGIOUSNESS OF TUBERCULOSIS.

In Paris, during the holidays, the faculty of medicine, take a vacation, being replaced by sub-professors. At the Hospital de la Charité, Dr. Laudouzy acting for Professor Hardy, delivered a lecture on the contagiousness of tuberculosis, favoring the theory of its contagiousness. Having referred to the experiments of Villemin, and others, he cited a case recorded by his father, and another under the observation of Dr. Weber, which he considered conclusive. He thinks it is the duty of every physician to act as if the contagiousness of tuberculosis had been proven. One point in Dr. Laudouzy's lecture deserves particular notice, namely, the mortality among military men from tuberculosis. In France, in 1872, the proportion of deaths was 452 per 1,000, in England it was 782 per 1,000, and makes the startling remark, that the British army, during the rigorous winter of 1854–55, before Sebastapol, lost fewer men from pulmonary phthisis than in their barracks. A circumstance strongly favoring the doctrine of the contagiousness of the disease.—Paris Correspondent to *London Lancet.*

SUCCESSFUL TREATMENT OF UNUNITED FRACTURES OF HUMERUS, RADIUS AN ULNA.

Mr. Jones, of Stanley Hospital, Liverpool, reports to *The Lancet* some interesting cases of non-union. A case of fracture of the radius at the junction of the middle with the upper third, of twelve months' standing. The second case narrated, was of the ulna at middle third, of one year's duration. The third case was fracture of the neck of the humerus, with non-union at end of ten weeks. Each case had been properly dressed with the usual splints.

The treatment used was after the method of Mr. Thomas, known as "percussion." Of this there are two varieties. The one consists of severely percussing the limb over the seat of fracture at long intervals; the other is a daily but gentle performance. With either measure, elastic bands should be tied above and below the fracture to induce local congestion. The hammering is done with a covered instrument so as not to lacerate the soft structures. If the more severe method is adopted, there will be a good deal of swelling and some contusion after each beating. At the beginning, splints are not applied, but when a decided thickening of the ends of the bone is noticed, they should be put on. At night when the circulatory system is less active, the elastic bands are more especially necessary. The tubing should not always be tied at the same spot as laceration may result. The application of the tube at night is generally quite sufficient.

A CASE OF TAPE WORM PASSED BY THE MOUTH.

A woman seventy-nine years of age was admitted April 3, 1879, at the Poplar and Stepeny Sick Asylum. There were no symptoms of intestinal irritation, except an attack of diarrhœa in March, 1881. During the night of April 15, 1382, the nurse, on going to the patient, noticed, what in the dim light, looked like a piece of tape, projecting from her mouth; on extracting this it was followed by more; after withdrawing several feet of it, she became alarmed and hurried off to the night superintendent with the startling news that she "was afraid she had been pulling a woman's gut out." By the aid of more light the superintendent discovered that the object was a part of a tape worm, and withdrew, in a hand-over-hand manner, the entire worm, tail first and apparently dead. It was found to be a perfect tænia mediocanellata, measuring twenty-eight feet and bearing its head. Strange to say from this time the patient gradually sank and died in a few days.—*London Lancet*, October 21, 1882.

CLINICAL OBSERVATIONS ON TREATMENT OF ENLARGED TONSILS.

BY GORDON HOLMES, M. D.

(1) *Excision.*—Few authorities will dissent that excision is the most fitting remedy. The condition of the tonsils deserves attention at the time of operating. When patients present themselves, the organs, as a rule, are acutely or subacutely inflammed. Some practitioners will operate at once, others will wait until the tonsils have regained their ordinary condition of indolent chronic enlargement. Clinical observation favor delay. Immediate excision, with the attending hemorrhage, may abort an attack of quinsy. In very acute tonsillitis the pain of the operation may be excruciating and it may even be difficult to open the mouth wide enough for the accurate introduction of the instruments. But the most important consideration is that after the inflammation has subsided. A few weeks of general tonic and local astringent treatment may reduce the glands to their natural size. However, immediate operation is advised, when other circumstances are favorable, in a case of permanent hypertrophy.

The use of the tonsillotome is preferred to the bistoury and tenaculum, owing to the ease and rapidity with which it can be used. Both Physick's and Fahnstock's instruments are recommended, but a decided preference is given to that of Fahnstock.

(2) *Caustics.*—Frequently it happens that excision is not necessary or not permitted. Then astringents or caustics are

the other resource. Astringents may promote resolution in cases of temporary engorgement, but are totally powerless in true hypertrophy. Repeated cauterizations, destroying small portions in slow succession, is the only method that promises success. Applications of solid nitrate of silver, chloride of zinc (in stick), Vienna paste, London paste, or galvano-caustic, to a limited area, every two or three days are recommended. This process, as a rule, is so slow and tedious, that few persons persevere until positive results are obtained.

There is, however, another method of applying the common caustics to the tonsils. The gland is permeated by rather large channels, seven to fifteen in number, the orifices of which are sufficiently large to be plainly seen and counted *in situ*, whilst in the hypertrophied condition they greatly increase in size and are capable of admitting an ordinary size probe. These natural channels provide a way to attack the heart of the gland in a most efficacious manner. Thin pointed sticks of nitrate of silver or chloride of zinc can easily be pressed into the canals and worked around for a few seconds.

Small sloughs are formed, and soon discharged. The tonsils are hollowed out, and subsequently contracted by cicatrizations. Two or three lacunæ in each gland can be cauterized daily and thus act on comparatively large surfaces with but slight external soreness and little or no inconvenience to the patient.—*Lancet*, November 11.

RADICAL CURE OF HERNIA.

In Mr. Bank's paper read in the Section of Surgery of British Medical association, he says: A hernia which cannot be kept up by a truss demands radical cure. Such operation restores the patient's tissues to their original state of integrity. That surgical bugbear, the peritoneum, has been exposed. Listerism has inspired confidence. Surgery of serous membranes has greatly changed. The removal of the sac, one of the oldest operations, has been revived. The neck is ligated, the sac excised, and the margins of the abdominal opening stretched together. In performing it, the writer has the parts most carefully shaved, and uses a thorough antiseptic treatment. In inguinal hernia the incision is begun an inch above the external ring. The sac is then freed from surrounding tissues. The sac must be fairly reached before any stripping of it is done. Care must be taken that, an old sac by being adherent to the tunica vaginalis, the testicle be not dragged out of the rectum. Adherent omentum carefully separated, is tied with cat gut and cut away. The stump must not be pushed into abdomen until every drop of bleeding has ceased. Being sure that the sac is completely emptied, it is pulled down, and then tied up as high as possible, using two ligatures of strong cat gut. The pillars of the external ring are now pulled together with several stitches of silver wire which are cut short off and left *in situ.* A clean carbolized sponge put beneath antiseptic gause is best dressing for the first twenty-four hours.

The writer had performed the operation in thirty-two cases. His paper was accompanied with a table giving particulars of thirty. In twenty-one, it was done directly for curative purposes, and in eleven, as part of the operation for strangulated hernia. Not one death resulted from the operation. The introduction of the radical cure, as a part of the ordinary operation for strangulated hernia, he thinks, will mark an important epoch in the history of that operation.—*British Medical Journal.*

HEMORRHAGE AFTER EXCISION OF THE TONSIL,

The removal of an hypertrophied tonsil is a frequent and simple operation, in connection with which any complication is so infrequent as to be unheeded by many operators. Experience abundantly proves, however, that although it is attended with danger from primary hemorrhage, a more serious result is a profuse "secondary" hemorrhage. When the flow of blood is alarming, it is generally caused by a vessel in some neighboring tissue that has been wounded. The vessels of the tonsils are small and lie in soft tisues, which readily permits them to contract, but the palatine and pharyngeal arteries are much longer and lie in muscular tissue, where they are constantly exposed to disturbance from muscular movements.—*Lancet.*

TREATMENT OF SOME CHRONIC GASTRIC DISORDERS.

M. Broca, in a series of articles (*Le Progrés Mèdical*) strongly advocates, in ulcers of the stomach, and chronic gastritis from various causes, the systematic washing out of the stomach and artificial feeding. In washing out the stomach there are two indications to fulfill—one to empty it of its contents, whatever they may be; and the other, to treat the diseased mucous membrane with medicated solutions. He advocates the use of the siphon tube, on the ground that its manipulation is so easy that in a short time the patient can learn to wash his stomach out himself. The washing over, the patient should be fed before the tube is withdrawn, powdered meat, raw eggs, milk, broth being the most suitable food. He lays great stress on the advantages of over-feeding the patient, and mentions 600 grammes of meat, one dozen eggs and three litres of milk as a daily allowance that may easily be exceeded. It is always necessary to commence gradually, until it is ascertained that the patient can digest milk and eggs well. Should any pain come on some hours after the meal, it is advisable to empty the stomach by means of the tube. The cure is permanent, if the patients only take proper care of themselves afterwards. He thinks this mode of treatment might with advantage be extended to other cases than purely stomachic disorders; he suggests it, for instance in advanced phthisis.—*Medical Times and Gazette.*

ANTISEPTICS IN PHTHISIS.

Dr. William Porter, Physician to Throat and Lung Department, Saint Luke's Hospital, Saint Louis, thus summarizes:

Proven, it seems to me, are these two propositions:

(1) Phthisis is a specific disease from a specific cause.

(2) Phthisis may be produced by absorption of tuberculous matter in contact with the mucous membrane of the air passages or intestinal tract.

There is also evidence that the energy of this tuberculous matter is due to germ development and progression.

Hence the value of antiseptic influence in the treatment of phthisis, not only in the later stages, during pus production and absorption, but also in the earlier process of infection.

One great demand is for that, which by local and internal use, may meet and destroy the septic agencies of disease. Such a remedy must be effective, unirritating and non-poisonous, susceptible of ready dilution and easy absorption, and withal inoffensive in odor and taste.

Carbolic acid and iodoform do not fully meet these requirements, and less harmful, yet no less potent, means of antagonizing contagion and putrefaction are finding favor.

The compound known as Listerine has for nearly two years served me better than any other remedy of its class, and, in the treatment of phthisis, has almost supplanted, in my practice, all other antiseptics. In treatment of diseases of the upper air passages it is pleasant and does not irritate; in the fermentative dyspepsia, so often accompanying phthisis, it is safe and efficient.

It is the most powerful non-toxic antiseptic I have yet found. —*Lancet and Clinic.*

PREVIOUS SYMPTOMS IN CASES OF PERFORATION OF THE BOWEL IN TYPHOID FEVER.

After giving the history of a girl aged thirteen, in which the perforation was verified at the *postmortem* examination, Dr. Byers states it was difficult to assign any cause for its occurrence. The patient was gaining ground, but on the sixty-fifth day, severe symptoms set in, after she had passed a solid motion. He thinks all careful clinical observers must admit that perforation of the bowel in enteric fever may occur in cases in which the previous symptoms afford no clue as to the extent of the intestinal lesion. It is met in extremely mild cases; during convalesence; in patients who never took to bed until the fatal complication set in. However, certain symptoms have been met, and recorded as pointing to severe and deep ulceration of the bowel:—That perforation is met with most frequently in the more serious cases of the disease; that great tympanites is likely to produce it; that continued elevation of temperature after the third week points to severe intestinal lesion; that a deep ulcer will paralyze the bowel and produce constipation; that severe tremor is another symptom; that protracted headache in the early stages is believed to denote an unusually severe affection of Peyer's patches. When, from the presence of some of these symptoms, severe and deep ulceration is suspected, the treatment should aim at keeping the bowel quiet. The patient should be made to lie on his back, and not the slightest movement allowed. All nourishment should be liquid. Purgatives should not be given, especially when there is constipation. Opium should be administered to paralyze the movements of the bowel.—Extract from paper read at annual meeting of the B. M. A., by John W. Byers, M. A., M. D.

RETENTION OF ONE HUNDRED AND SIXTY OUNCES OF URINE.

A woman, aged thirty, was admitted into the North Staffordshire Infirmary for supposed abdominal tumor. She had been in usual good health, and believed herself to be about four months pregnant. For a fortnight before admission no urine had been passed. A catheter was introduced at once and one hundred and sixty ounces of urine drawn off. The next day seventy ounces more were taken away. An examination revealed retroversion of uterus. Chloroform was administered and the uterus replaced, which appeared to be literally "upside down." The patient gradually sank and died second day after operation. The case shows the danger of neglected retroversion during pregnancy, also, the enormous extent the bladder may be distended without actual rupture.—*The Lancet.*

REDUCTION OF DISLOCATION OF THE SHOULDER.

A valuable paper on this subject was read by M. Kocher at the meeting of the International Congress at London. In the subcoracoid form, the aim of the surgeon should be to open out the rent in the capsule, and to relax the untorn parts, which are rendered tense by the false position of the head of the bone. To accomplish this the patient should be seated, with the surgeon on the left side. The elbow-joint flexed to a right angle, and firmly pressed against the side of the chest, the forearm is to be slowly, gently and steadily rotated out until firm resistance is encountered; then maintaining this rotation the arm is to be raised foreward and a little in, and lastly to be rotated in and the hand brought toward the opposite shoulder. This method has great advantages over those in common use and is especially valuable in old dislocations, enabling them to be reduced without any force and without anæsthetics.—*Lancet*, November 11.

DANGERS OF GROUND AIR.

As all the interstices of the ground are filled with air, the more porous the soil the greater the quantity of ground air. About one-third of the bulk of a gravelly soil is air. If a cesspool or leaky drain pipes are placed in this kind of soil offensive emanations will be given off. These may, especially under variations of temperature and pressure of the air, travel a rather considerable distance, and make their way into houses, especially when the air of a house is raised by fires to a much higher temperature than that of the ground. An instance is known where the foul air of a cesspool was drawn a distance of twenty-seven feet into a house.

Ground air consists of atmospheric air intermingled with carbonic acid, marsh gas, and occasionally with sulphurretted hydrogen. If there be any putrefying organic matter in the soil, the ground air will also be contaminated with injurious gases resembling sewer emanations. Movements are produced in the ground air by rains which raise the level of the ground water; by winds, from their drying actions on the surface of the soil. Fevers, cholera, diarrhœa and dysentery are the effect when this escape of ground air is carried into a house.—From opening address on "Meteorological Phenomena" by J. W. Tripe, president of Society of Medical Officers of Health, (England).

ARTIFICIAL HUMAN MILK.

The method of preparation of artificial human milk as recommended and used by Professor Frankland is as follows: Let one-third of a pint of new cow's milk stand twelve hours, then remove the cream, and add to it two-thirds of a pint of new milk as fresh from the cow as possible. To that one-third of a pint of blue (or skim) milk left after taking away the cream, add a piece of rennet (about one square inch in size) which after it has served its purpose can be taken out and used daily for a month or two, and allow the vessel holding the skim milk to be placed in warm water and there remain for from five to fifteen minutes until curdling is effected. Break up the curd repeatedly and carefully separate the *whole* of the whey, which should then be rapidly heated to boiling in a small tin pan, placed over a spirit or gas-lamp; during this heating a *further* quantity of casein, (technically termed "fleetings") separates, and so straining after this, through fine muslin, is then required. Now dissolve one hundred and ten grains of powdered milk sugar in *hot whey*, and mix it with two-thirds of a pint of new milk as before prepared with extra cream. This gives us one pint of artificial human milk which should be used *within twelve hours* of its preparation. All vessels and apparatus concerned in the manufacture being kept scrupulously clean.

DIPHTHERIA TREATED BY LOCAL APPLICATIONS OF BORAX OR BORACIC ACID.

Before the *Clinical Society of London*, November 10, Dr. Goodhart narrated six cases. Four were treated with a saturated solution of boracic acid in glycerine, applied in part, each, by hand spray and laryngeal brush, in some cases as often as every two hours. In two, a dilute solution was used. The first case died from renal complication, the throat symptoms were relieved and reformation of membrane presented. Of the other five cases, three had "croup," one had nasal diphtheria, all had albuminuria. All recovered.

Tracheotomy necessary in one case; solution applied through wound to surfaces of trachea and larynx and of the wound. The membrane was loosened and dissolved and reformation presented.—*British Medical Journal.*

TREATMENT OF POST PARTUM HEMORRHAGE BY HYPODERMIC INJECTIONS OF ERGOTININE.

A paper on this subject was read before the Obstetrical Society of London by Dr. C. Chambazian (Paris). Ergotinine is the alkaloid of ergot of rye; insoluble in water, soluble in alcohol or chloroform. It is indicated in post partum hemorrhage due to imperfect contraction of the uterus. The dose for hypodermic injections is five to ten minims of a solution containing one fiftieth of a grain in twenty minims. This might be repeated if necessary; but more than twenty minims should not be given. This produced strong and permanent contractions of the uterus, acted quicker than ergotine (which is only an extract of ergot), did not cause local abscesses or indurations.

Ergotinine is to ergotine as morphia to extract of opium. The uterine contractions usually came on in from two to five minutes after injection of the ergotinine.—*Medical Times and Gazette*, November 11.

MISCELLANEOUS ITEMS.

ELECTRIC lamps are to be introduced into the dissecting room of the Ledwich School of Medicine, Dublin.

THE PHYSICIAN AND SURGEON is unavoidably late this month occasioned by a mistake at the warehouse in shipping us paper.

GASTROSTOMY performed at the Hull Infirmary by Assistant Surgeon Nicholson. Patient living eight weeks after operation.

NEPHRECTOMY successfully performed by George Elder, M. D., Surgeon to the Hospital for Women, at Nottingham, England.

DR. FISCHER proposed the *crude* naphthaline for destroying the phylloxera, which has done so much harm to vineyards. Trials in this direction are now being made in France with successful results.

MR. GEZOW, an apothecary of Russia, recommends salicylic acid, thirty parts; extract of cannabis indica, five parts; collodion, two hundred and forty parts, as a "sure" remedy for corns, removing them without pain.—*Medical and Surgical Reporter.*

DR. A. D. WILLIAMS says in the *American Chemists' and Druggists' Bulletin*, that the most effectual remedy for earache is a solution of atropia, in strength varying from one to five grains to the ounce, simply dropped into the ear and repeated when necessary.

CAMPHOR ENEMA.—M. Vigier states (*Gaz. Hebdom.*,) that camphor (or musk) may be perfectly suspended and become easily divisible by the following formula:—Camphor one gramme, gum arabic two grammes, one yolk of an egg, and two hundred and fifty grammes of decoction of linseed.—*Medical Times and Gazette.*

INUNCTIONS IN SCARLATINA.—A correspondent to *The Lancet* says: That inunctions of any oil or ointment may be a perilous proceeding, because by diminishing cutaneous elimination, it may increase the blood-poisoning and cripple ultimately the renal excretory work, and is thus calculated to induce albuminuria and acute rheumatism.

ONE hundred consecutive cases of ovariotomy without any of the Listerian details, were reported at the annual meeting of the British Medical Association, by Lawson Tait, F. R. C. S. Of this series only three died. This increased success was attributed chiefly to the total abandonment of the clamp treatment of the pedicle; Kieth's method of cleaning the peritoneum; complete abandonment of the use of carbolic acid, or any antiseptic system.—*British Medical Journal.*

THE typhoid epidemic at Paris, is rapidly extending, and is exciting considerable consternation. The mortality has increased fivefold in three weeks, from fifty-seven in one week to two hundred and fifty in the third. The admissions into hospitals correspondingly increased, being two hundred and thirteen in the first, and one thousand one hundred and one in the third. At one time there were no less than two thousand one hundred and thirty-six hospital cases.—*London Lancet.*

RADICAL CURE OF HYDROCELE.—For this purpose Dr. Lampugnani, of Pavia Hospital employs with great success, chloral hydrate dissolved in equal parts of warm distilled water, injecting by means of Potain's capillary trocar. As a general rule one or two grams of chloral in children, and four in the adult, and from that dose to eight grams in the aged. The burning pain produced is allayed by cold applications; and if absorption has not become complete in eight or ten days, the injection in a smaller dose is repeated.—*Gaz. Med.*

CURES FOR CHILBLAINS.—"Rusts's frozen wash," an old remedy consisting of equal parts of dilute nitric acid and peppermint water, is recommended by Dr. Lapatin, of Fiflis. Brush the parts once or twice a day with the solution. A superficial scab forms after three or four applications, which when thrown off leaves a healthy skin. Balsam of copaiba is regarded a quick and reliable remedy. Spread the balsam thickly on a piece of muslin, cover the affected parts with it during the night, a stocking will hold it in place. During the day some of the balsam is merely spread on the parts.

THE MICROSCOPE IN DIARRHŒA.—A late and very practical use of the microscope as a common aid to diagnosis and treatment of disease was made by Kenneth W. Milican, of Kineton, England. A number of persons were suddenly attacked with diarrhœa. The local symptoms violent, but no constitutional disturbance. Stools examined and found to be swarming with bacteria, Previous to examination, treatment consisted in astringents and opium, but had no effect. The treatment was now one and one-half grains of carbolic acid in tincture of cardamom and water of peppermint every four hours, which proved in the highest degree satisfactory.

THE

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ORIGINAL ARTICLES.

THE HEREDITARY INFLUENCE OF ALCOHOLIC INDULGENCE UPON THE PRODUCTION OF INSANITY.*

BY H. M. HURD, M. A., M. D., PONTIAC, MICHIGAN,
Medical Superintendent of Eastern Asylum for the Insane.

Physical characteristics are transmitted by parents to their children. The expression and distinctive features of the countenance, the color of the hair and eyes, the complexion, the texture of the skin, the physical stature, the gait and general bearing of the father or mother are reproduced in their children. The same is equally true of mental characteristics. They are notably matters of inheritance. Diseased bodily states are also inherited. Gouty, rheumatic and tubercular parents beget children whose constitutions are impaired by the inherited taint in the blood.

As a general rule the more wide-spread or deep-seated the constitutional disease of the parent, the greater the probability of its transmission in some form to his children. It is not usually transmitted as an actual disease, but as a condition of the bodily system which predisposes the offspring to take on diseased action whenever adequate exciting causes are present. If a person predisposed to tubercular disease does not live prudently, in accordance with hygienic laws, avoiding excesses, unhealthy occupations, unhealthful climate, or undue exposures to the weather, there is every reason to anticipate that he too will develop a similar disease. This tendency, it is true, is not inevitable. On the contrary, the latent capacity of the individual for the development of tubercular disease, may, through judicious management, be kept in abeyance, and he may enjoy a life of comparative health and comfort. The probability that disease will develop whenever circumstances conspire to foster it, is, however, very strong.

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*Read before the State Sanitary Association at Pontiac, February 1, 1883.

A similar law governs in diseases of the mind, or of the nervous system. They are peculiarly transmissable, because they affect the most complex part of the human mechanism and tissues which are at all times easily disordered. If a child inherits a defective nervous organization, the tendency of his growth as he develops is towards a condition of disease; or, in other words, the divergence from a healthy standard is wider and wider as the body develops and matures. The sensitiveness of the nervous system is due to the fact that its structure is more unstable than that of any other bodily tissue and hence destructive changes occur more rapidly in it than in other less highly organized structures. If therefore a child inherits a defect of the nervous system, whether from the insanity, inebriety or, nervous exhaustion, of his parents he is much more liable to develop actual disease than if he had inherited a tendency to bodily disease merely. The same is true of mental defects. The eccentricity or violent temper of a father is reproduced as actual insanity in his son. The feeble-minded mother has an idiot child. Highly nervous parents beget children whose lives are clouded by the foreboding of insanity. The children of insane parents inherit a capacity for the development of mental disease. These and similar degenerations can be predicted with comparative certainty when the morbid characteristics of parents are fully known.

My theme is the relation of drunkenness in the parent to insanity in his children. It is my purpose to show that the inebrity of a parent is as potent as his actual mental disease or mental deficiency to predispose his children to the development of insanity in their turn. This is shown by the following facts.

(1) Drunkenness is a transient insanity. Its early stage of exhiliration and mild excitement, its later stage of delirium and mental aberration, and its last stage of stupor and profound insensibility, all correspond with similar stages in attacks of insanity. The inebriate in his debauch passes in a few hours through a psychical disturbance which differs in no respect from an attack of one of the forms of insanity, except in its duration. Examples of the transmission of this transitory mental aberration from parents to children are unfortunately too common. Every public institution for the care of the defective or dependent classes, shelters persons whose mental organiza-

tion has been defective from birth, in consequence of the transgressions of their parents in this manner.

(2) Prolonged and continuous indulgence in alcoholic liquors produces actual brain changes. In the brains of drunkards, effusions of serum are found beneath the covering membranes, and an alteration in the color and consistency of the brain substance. The brain is harder than normal, and its proportion of white substance is increased. This arises from the fact that alcohol has an especial affinity for nervous structure, and modifies its composition and nutrition whenever it is taken into the system. Organic alterations of structure of this character must affect the brain and nervous system of offspring equally with other similar degenerations, which are known to be transmitted. The *good*, that is, healthy tree, may by accident or misfortune bring forth poor fruit, but the *corrupt* or diseased tree *cannot* bring forth good fruit.

(3) Chronic alcoholic indulgence impairs, if it does not destroy the mental vigor of the individual. It impairs the memory, the reason, the sound judgment and the will. It unsettles a man by taking away from him habits of industry, of self-respect and of orderly living, and by substituting idleness, self-indulgence and a feeling of irresponsibility. Such mental characteristics in parents do not lead us to look for their opposites in their children. Idleness, improvidence, and vice, are generally handed down from generation to generation.

(4) Chronic alcoholic indulgence produces more serious disturbance of the moral than of the intellectual faculties even. The inebriate is quarrelsome, irritable, untruthful, immoral, vicious and brutal. He displays moral perversions and loses his sense of justice, of honor and of right and wrong. No inheritance can be worse than vicious propensities and no qualities are surer to be transmitted to the children.

(5) Chronic alcoholic indulgence produces actual diseases of the mind and of the nervous system. Hammond states that in his experience it produces every form of insanity, including that most hopeless form known as paresis. He also from his own experience gives a list of ten distinct diseases of the brain, three diseases of the spinal cord, four diseases of the cerebro spinal system, that is of the brain and spinal cord combined, and five of the nerves which are distinctly traceable to chronic alcoholism. These statements have been confirmed by all who have had experience in the treatment of nervous and mental diseases. It is needless to say that all of these forms of disease existing in parents, *however they have been acquired*, are known to affect the susceptibility of offspring to develop similar diseases. If children escape actual disease, they nevertheless inherit a diminished power to resist morbific influences in the direction of diseases of the brain or nervous system.

(6) The marked instability which characterizes the nervous

system of the children of inebriates is shown by the facility with which the transformation of normal conditions into abnormal states occurs. They are light-headed after a slight derangement of digestion or of the circulation and easily develop trance states, somnambulism, hysteria and cateleptoid conditions. Their vital resistance, which depends largely upon a good state of innervation, is lessened, and they fail whenever any mental or physical strain comes upon them. The children of inebriate parents are notably liable from this cause to accustom themselves to stimulants and to resort to alcoholics, opium, chloral or tobacco to spur their flagging energies to action.

It being therefore granted that the inebriety of parents is a potent agent in determining the susceptibility of children to develop insanity, it becomes now a matter of interest to consider the characteristics of those who have received this morbid inheritance.

Some of the children of drunkards inherit immediately from their parents diseases like epilepsy, chronic chorea, hysteria, idiocy or imbecility. They are objects of interest from the stand-point of the pathologist or physician from the cradle to the grave. They suffer, and are burdens to their friends, or to the community as long as they live. Their condition will be more fully described in another connection. I now desire rather to speak of the characteristics of those who do not inherit actual disease. As a rule such children are precocious. They develop prematurely, and show considerable intellectual quickness. They often possess a taste for music or painting, or for special handicrafts and are ingenious, winning and attractive to all who come into relations with them. They are tasteful in dress, if females, and showy, almost brilliant, in conversation and bearing. They sometimes display, from tender years, perversion of the moral sense. They are untruthful, unscrupulous as to the means employed to accomplish cherished plans, indifferent to the property rights of others, and lacking in an appreciation of abstract right and justice. At puberty, they often develop unpleasant characteristics. They usually display at this time a lack of mental equilibrium, and frequently lose those traits of mind which in childhood proved attractive. They are wayward, jealous, suspicious, perverse, and often shock their parents and interested friends by acts of apparently wanton cruelty towards younger children, or towards animals. As adult life is reached, if females, they become hysterical and nervous, and often sink into a condition of invalidism which terminates sooner or later in actual insanity. Males, at a corresponding age, become restless, reckless, dissipated and vicious. Many of both sexes develop insanity at adolescence without adequate exciting cause, and remain insane for life. It would seem as if the original potential energy of the brain and nervous system had become exhausted during the comparatively brief period of childhood and youth. Stimulated to unnatural activity by a highly excitable nervous system, they develop precociously and wear out prematurely. If the early environment of such persons has been favorable, or the morbid tendencies derived from one parent have been neutralized by those inherited from the other, they may go through life without breaking down. All, however, are liable to develop insanity whenever subjected to any severe strain. Financial reverses, over-work, over-worry, ill-health, child-bearing, change of life, old age—these and many other exciting causes are sufficient to destroy mental health. Whenever mental disease is thus developed, the ability of the individual to recover is much diminished. As a rule such persons do not recover from attacks of mental disease, or at best make what is known, for lack of a better expression, as "imperfect recoveries." They are liable to a recurrence of similar attacks upon slight exciting causes and eventually become incurable. In many instances the fact that a tendency to insanity has been derived from an inebriate ancestor renders it necessary to give an unfavorable opinion as to the prospects of complete recovery from an attack of insanity, which under other circumstances would have been curable. This will be referred to again further on.

What forms of mental disease are developed in the children of drunkards, and what are the peculiar characteristics of such diseases?

A careful analysis of several hundred persons admitted for treatment to the Eastern Michigan Asylum shows that in about seven and one-half per cent. of the males, and in about eight and one-half per cent. of the females, there was a definite history of inebriety in one or both parents. I am positive that these figures fail to indicate the full extent of inebriate heredity in insane patients, because they very rarely show the habits of any, except the immediate ancestors—that is the father or mother. I am of the opinion that if we know the habits of the grandparents, or other remote ancestors, we would discover the key to many cases, the causes of which, at present seem mysterious. It should not be forgotten also that many patients are admitted to asylums whose histories are very faulty. From all the facts which have come to my knowledge in the investigation of this subject, I have no hesitation in saying that at least ten per cent. of all insane persons at present under treatment in the Eastern Michigan Asylum owe their predisposition to mental disease to an inebriate heredity. The greater proportion of females inheriting this predisposition is due to the fact that daughters are much more liable to inherit the mental and physical characteristics and defects of their fathers, while sons inherit similarly from their mothers; and for obvious reasons fathers are much more liable than mothers to transmit the degenerations and deceased tendencies which originate in alcoholic indulgence. In females, too, the tendency is to the development of a more active form of insanity, and the probabilities of recovery are correspondingly better. In males there is a relatively greater tendency to the development of degenerative forms of disease. This is probably due to the fact that when mental and physical characteristics are derived by males from the father the mental equilibrium and physical vigor are not as uniformly maintained as when these characteristics are derived from the mother, and hence the probability of a degenerative brain change is increased if the father is an inebriate. The same is also true of females where a neurosis is derived from an inebriate mother whose characteristics they inherit. The female children of drunkards suffer in relative frequency from the following forms of insanity: Mania, dementia, melancholia, epilepsy, and idiocy. Male children suffer from dementia most frequently, next from mania, then from epilepsy, melancholia and idiocy. If both father and mother are intemperate, there is an increased tendency to epilepsy or imbecility. If inebriety be present in one parent, and insanity in another, an incurable form of insanity is very apt to be developed in the children. In the majority of cases, mental disease developed itself at the period of life when the greatest strain comes upon the endurance of the individual—that is, between the ages of twenty and forty-five years. Between these years women suffer from the perils and accidents of child-bearing. They have the cares and responsibilities of families and undergo the fatigue and exhaustion consequent upon the care of children, and the nursing of the sick. Men, during this period, labor the most constantly and endure the greatest hardships. They encounter greater business perplexities and assume larger responsibilities. The grosser passions are also more active and the danger of exhaustion from this cause is largely increased. When the nervous energy and physical vigor of the individual are exhausted, the nutrition of the brain cells is interfered with, and irritative changes occur within them. These changes produce attacks of mania, a form of insanity characterized by excitement; or melancholia, a form of insanity marked by depression, painful delusions and morbid fears. If the original nerve constitution be unstable, as in the offspring of drunkards, there is a lack of recuperative power after the attack of excitement or depression is over, and the termination of the disease is in the permanent weakening of the mind.

In some instances an inebriate heredity developes in one child as depravity, in another as inebriety, in a third as hysteria, and in a fourth as insanity.

In those unfortunate cases where the brain and nervous system of the parent was poisoned by alcohol when their existence began, conditions of actual disease are always present. In some instances the brain and nervous system are endowed with an excessive degree of excitability, which gives rise to convulsive seizures or to chronic chorea. Here the re-action of the nervous system to external stimulation is excessive, and perpetual disease and disorder results. In other cases the growth of the brain has been arrested prior to birth, and the mind does not develop at all, or it develops very imperfectly. This is ascribed by some to the direct effect of alcohol to increase the growth of the connective tissue of the brain which is developed at the expense of the gray matter, and thus encroaches upon the thought-producing portion of the brain structure.

The limitation placed upon me by the brief time at my disposal, and the exigencies of a paper addressed to a popular audience, have only permitted me to state bare conclusions in a dogmatic manner. I trust, therefore, you will bear with me while I give briefly a few cases which are presented to illustrate more clearly some of the foregoing statements.

In one instance an inebriate father had an imbecile daughter and she in turn gave birth to an idiot of the lowest grade. The mother was capable of some useful employment, and had taste in dress and some refinement. Her son was incapable of conversation or of attention to physical wants, and has for many years required the care and attention which is only possible for such unfortunates in a large public institution.

A farmer of acknowledged ability and standing, who was extremely well connected, drank alcoholics to excess during his life. His daughter became insane, and for many years suffered from alternate periods of elation and depression. A son was peculiar, and never successful in busines; and another son committed suicide during a period of depression. The daughter had several children, one of whom suffered from epilepsy, another from hip-joint disease, and a third was reckless and dissipated.

In some instances mental or nervous defects can be traced directly to inebriety, as the following will show. A German of education and of good habits came to America in early manhood, and married. His first child inherited a good nervous organization, and was healthy. Becoming involved in financial difficulties he then became dissipated, and a daughter who was subsequently born, although possessing considerable mental force and physical vigor, became insane without adequate exciting cause at the age of seventeen years, but through prompt treatment made a good recovery. A third child, born when his habits of dissipation were fully confirmed, had a very impressible nervous organization, and became morbid at an early age, and was seriously threatened with insanity before puberty. It is evident that the varying degrees of health of these three children were directly related to the increasing inebriety of the father.

As has already been stated, insanity is not invariably inherited from inebriate ancestors. Defects in other directions are frequently developed as well. In one instance, all of the children of an inebriate were eccentric, suspicious, peculiar in their religious views, and generally at variance with the rest of mankind; only one was insane. In another instance, of four children born to an inebriate father, two had the opium habit, a third committed suicide, and a fourth was insane. In another instance, an intemperate father had an eccentric and very miserly son, and he in turn had an insane son.

In some instances the hereditary taint seems to descend to a second generation leaving the first generation comparatively healthy. In investigating the case of an insane patient it was found that both maternal and paternal grandparents had been hopeless drunkards while the father and mother had led exemplary lives and had escaped attacks of insanity. In the family of the patient, however, one brother was known to be erratic and although full of ability, was unsettled and unsuccessful, while another was depraved.

Cases of similar import could be added until you became wearied. They would only serve to illustrate the statements made and emphasize the duty of the State to take measures to prevent similar degenerations of the race. The marriage of all inebriates should be prohibited by law and chronic drunkeness should be made a sufficient ground for divorce. Wise men and good men may honestly differ as to the advisability of prohibiting the liquor traffic by legal enactment. Heretofore in the absence of an overwhelming public sentiment in its favor all attempts at prohibition have been futile. The propriety and necessity of some efficient legal steps to arrest the degenerations which flow from chronic alcoholic indulgence, commend themselves to the reason and judgement of every good citizen.

To recapitulate: In the foregoing paper I have endeavored to show that inebriety in parents is a frequent cause of the insanity of their children because drunkenness produces a transient insanity even in a healthy brain. Chronic drunkeness produces organic brain diseases bringing in their train, impairment of the memory, inactivity of the reason, a weakening of the will and a loss of the natural affections; also moral perversions of vicious propensities, and finally unmistakable diseases of the mind and nervous system—all of which are capable of transmission to children.

That the children of inebriate parents inherit diseases such as epilepsy, hysteria, chorea, and idiocy or if not actual diseases, nervous systems which are abnormally responsive to every form of disturbing influence and easily disordered.

That between the ages of twenty and forty-five insanity is liable to be developed in the children of inebriates and that insanity of this type is recovered from imperfectly or not at all.

And finally, that however much people may differ as to the expediency of "prohibition," so called in the present state of public sentiment, there should be no difference of opinion among thinking men as to the right and duty of the State to take strenuous measures to prevent the transmission of an inebriate heredity to children.

RELATIONS OF THE MEDICAL PROFESSION TO THE PUBLIC HEALTH LAWS.*

BY HONORABLE LEROY PARKER, FLINT, MICHIGAN.

The relation of the medical profession to the public health laws of the State, is a peculiar and somewhat anomalous one. The business of the profession—and by business I mean the means by which its members make their profit—is that of healing the sick and afflicted. Sickness and disability then, are the foundation of their prosperity; just as quarrels, disputes, misunderstandings and crimes of the people are the source from which the legal profession derives its profit and income. In a word, both professions make their living mainly from the disabilities and errors of their fellow men. Eliminate injustice and wrong from men's actions and you cut off nine-tenths of the business of lawyers. Eliminate all preventable sickness and disabilities from the bodies of the people and you cut off as large a proportion of the business of the doctors. The converse of this is also true that the more people who are sick and disabled, the more work there is for the doctors, and consequently the greater is their profit.

Assuming that the highest success of the medical profession consists in treating the largest number of sick, and consequently getting the largest amount of fees for their services, it follows that it is for their interest that there should be as much sickness and as little prevention of disease as possible.

The public health laws of the State have for their object the prevention and restriction of disease. The methods and machinery employed are solely for the prevention of the occurrence and spread of disease. Under a proper system of sanitary regulations, observed by all persons, sickness and disability would be reduced to a minimum. There would be no diptheria, scarlet fever or small pox; for in time there would be no germs to propogate these diseases. There would be none of the diseases which arise from special causes, such as poorly ventilated rooms, defective sewerage, or exposure to malarial influences; for these causes would all be done away with by the adoption of proper systems of ventilation, house sewerage and the drainage of the soil. If the theory of sanitary work is correct, and that theory is carried to its legitimate result, a time will come when people will die only from old age or unavoidable accidents; and even the latter cause of death will be largely diminished through the adoption of means for the prevention of accidents. When hotels are more absolutely fire proof; when hotel employees are careful and not criminal; when ample means of escape are provided for guests in case of fire or panic; when all public buildings, and those where many people congregate, are similarly provided with safeguards; when transportation lines, whether on land or water, can so manage that collisions, explosions, derailments or other accidents become impossible, then life will be secure whether we travel or stay at home; and the Newhall horror or the Cimbria disaster will be remembered only with astonishment that such wrecks of human life could possibly occur when the means of preventing them were so simple. In that day and generation will not the disciples of the healing art find their occupation gone?

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*A paper read before the State Sanitary Convention at Pontiac, January 3, 1883.

[We publish this article hoping that it may be both of interest and of value to see ourselves as others see us. Mr. Parker's long connection with the State Board of Health has given him opportunity to study the subject which he here discusses. May we be encouraged by his praises, and may we profit by his criticisms —EDITOR OF THE PHYSICIAN AND SURGEON].

Is there not an antagonism between the medical profession and the successful enforcement of the public health laws and sanitary regulations? Logically, it would seem that there is. If this antagonism exists, then reasoning from the universal impulse of mankind to look out for number one, we shall expect to find the medical profession opposing the enforcement of sanitary laws and regulations. But there are certain facts which appear to render our logical conclusions wholly fallacious. Our public health laws and sanitary regulations are very largely—I might say exclusively—due to the efforts of the medical profession to secure their enactment in order to lessen the ills which mankind suffers from disease, and to eliminate as far as possible their evil effects upon the race. It was the doctors who conceived the idea of the establishment of boards of health; who worked up the sentiment which made their establishment possible; who urged upon congress and legislatures the necessity for legalizing such bodies, and appropriating means to enable them to perform their work. These boards, both National and State, are principally composed of doctors, and doctors are in most cases the health officers of our municipalities. By a statute of this State every health officer of a board of health must be a physician, if a competent one can be found in the town.

The medical profession has, therefore, become the chief element in the work of preventing disease, and herein consists their anomalous and peculiar relation to the public health laws. Their business is to cure the sick, but they are doing all they can to keep people well. Their profits, as a profession, depend upon the number of the afflicted they are called upon to treat. Yet they labor earnestly to reduce this number to the smallest possible extent. Can disinterestedness go further than this? Sportsmen secure the enactment of laws for the protection and preservation of game, but it is that they may have better shooting and more of it in the years to come. Fishermen throw the protecting arm of the law around the finny tribes of our rivers and lakes, and secure the aid of the State to hatch out myriads of fish to stock our waters, but it is for the purpose of giving them better fishing; but no one has yet charged the medical profession with the deep desire of preserving the human race in order that they may have more subjects to practice upon.

It is *undeniably true* that the medical profession, from the most disinterested of motives, from a pure desire to alleviate human suffering, from a sincere and high purpose to prolong human life, have given time, skill, zeal, trained intellects and patient and laborious investigation to the solution of the problem of how to prevent the inception and spread of those diseases which cause human suffering and shorten the life of man. When I see the members of my own profession giving their time to organized efforts for the prevention of litigation, and establishing boards and holding conventions to carry out this purpose, then and then only will I admit that the medical profession is not the only one which is trying to cut off its source of bread and butter in the interests of humanity.

But if the general sentiment of the medical profession has been favorable to the organization and carrying out of sanitary measures, this fact only serves to show in a more glaring light the inconsistent actions and grave errors which sometimes have marred and disgraced the professional conduct of its members. It seems a pity to point out blemishes in a professional record as honorable and self-sacrificing as that which I have pictured in my opening remarks, but the pity is that such blemishes exist, and are being constantly created by the ill-advised judgment and jealous impulses of members of the profession. If what I say in reference to them is unpleasant by contrast with the good I have spoken of the profession, please remember, gentlemen doctors, that in the days before the gently gliding gelatine capsule was used to convey nauseous doses into our stomach without our palate knowing it, it was your custom to mix your bitter pills with a spoonful of sweet preserves, in order that the patient might smack his lips with delight, and think he was getting a good thing, until it had gone too far to reject the bitter from the sweet.

It is a circumstance often spoken of by the non-professional public, that there is more petty jealousy among the members of the medical fraternity than any other class of men; and that jealous zeal for their own particular opinions and obstinate adherence to opinions once formed, however erroneous they may be, has led to serious results in practice, and to a lowering of the popular confidence in the profession. Like many other popular beliefs, this is no doubt somewhat exaggerated, but it is unfortunately true that incidents are constantly occuring in the relations of the medical profession to the public and to the public health laws, which give color and foundation to such a belief.

Let me cite an instance: In a neighboring city, which I may be pardoned for saying has not its superior in the State for the general intelligence of its citizens, and the learning of its clergymen, its doctors and its lawyers, in the early spring of the past year a case of sickness occurred. The attending physician was the health officer of the city. He pronounced the disease to be small pox and so announced it to the family. He placed the usual small pox sign upon the house, and gave directions to the inmates concerning the necessary quarantine to be observed. The family were indignant at the health officer for calling the disease small pox; they discharged him, and called in another physician. This man, knowing the opinion of the health officer and what had been done, said the disease was simply the chicken pox. He directed the notice to be torn down and the quarantine to be broken. He ridiculed the opinion of the health officer, and told the family and friends that they might come and go as they pleased, that there was no danger. The health officer repeated his direction for quarantining the house, and renewed the notice. The former were disregarded and the latter was again torn down.

The neighbors taking sides in favor of the chicken pox theory, showed their contempt for the small pox theory, coming and going freely in the house. Very soon others who had visited the family began to be afflicted with the same disease.

The health officer tried to do his duty by posting notices and warning the public, but the same physician and others who sided with him, prevented by their advice, the observance of any quarantine. The harshest criticisms, ridicule and abuse, were heaped upon the health officer and those physicians who had verified his opinion in the cases. The result was that an epidemic of small pox soon prevailed; over forty cases occurred; many deaths followed, and the city and county were involved in an expense of thousands of dollars in addition to the cost to individuals for their own care and treatment.

In another town in this State an almost parallel instance occurred; only in this case it was the health officer, who was a physician, who insisted that an eruptive disease which prevailed was not small pox. Jealousy and bitter feelings were engendered; the necessary restrictive precautions were not taken, and a wide spread and fatal epidemic of small pox ensued.

In a pretty city not far from Detroit, the doctors refused to report cases of diphtheria to the health officers. Through some feeling of pique or jealousy they preferred to call the disease anything but diphtheria rather than report them as the law required. The result was, as in the other cases, an entirely unnecessary spread of the disease, which in many instances proved fatal.

These are a few out of many similar cases where a willful neglect to comply with the simple and plain requirements of the public health laws have produced a large harvest of disease and death. In the first instance, if the physician who called the disease chicken pox, had been willing to yield his opinion to the lawful regulations of the health officer, I venture to assert that the disease would never have spread beyond that house, and many lives and thousands of dollars would have been saved. Had he been correct and the health officer wrong, no harm would have come from the mistaken zeal of the health authorities, and the result would no doubt have given him triumphant proof of the correctness of his opinion. But he and his associates actually preferred to jeopardize the lives of a city full of people, rather than appear to admit that they were in the wrong, by allowing the health officer to treat the case as one dangerous to the public health. Had he and his brethren, in a generous and Catholic spirit, said to the health authorities: "We believe we are right in our opinion that this is a harmless disease, but as you think it a dangerous one, we will not interfere with your taking such precautions as the law requires," they would have been entitled to the highest praise for their good sense and respect for the law. Ignorance of the character of a disease may be excused. I am informed that it is sometimes difficult to distinguish between certain forms of small pox and chicken pox, between certain forms of throat diseases and diphtheria; but if a doubt exists as to the dangerous character of the malady, every possible chance should be avoided, by considering it as dangerous and guarding it. Any other course is wholly inexcusable. The public should be given the benefit of the doubt. If smoke were seen issuing from the crevices of this building, and some should say it was only a smoky chimney, and others should insist that the building was on fire, who would be willing to remain here quietly until the flames burst forth, without taking measures to ascertain the real situation, and provide for quenching the possible fire?

Every physician who respects himself and his high calling, should be willing to sink his own opinion in deference to those of others whose adherence to them may involve the most fatal consequences.

Complaints are often made that physicians neglect or refuse to report cases of dangerous diseases to the health authorities, and the reason assigned for such refusal is that their knowledge of their cases and the time which would be taken in making reports are their individual property, which the State has no right to take from them. This is not so. No man can legally or morally use his property to the injury of others. The knowledge of a physician of the existence of a dangerous disease which may be communicated to others, belongs to the community that it may suffer no harm. The time which he employs in making a report is his contribution to the public safety, to which all are required to contribute in one way or another.

While such reports and other services required of physicians by our health laws should be performed voluntarily, I am strongly of the belief that the public welfare would be far better subserved if for such services, a proper compensation was provided by the State. It would be far better and more economical if physicians and the health authorities were sufficiently well-paid to insure the most prompt and efficient performance of those duties which are required of them by law. It is cheaper to pay for prevention than for cure.

In the not far distant future I trust that every member of the medical profession will co-operate to the furthest extent with those who have to do with the administration of our public health laws. That they will do this from an earnest desire to acomplish good. That professional jealousy may never enter as a factor into our mortality reports. That the intercourse between the members of the profession may be characterized by a broad and liberal spirit, which taking no offense at variances of opinion will always strive to contribute to the highest physical good of mankind. In the code of ethics to which so many physicians yield allegiance, this rule should be incorporated, that whatever is necessary to be done by any member of the medical profession to carry out the purposes of the public health laws or to serve the interests of health and life, should be regarded as a sacred duty to be performed in any event, even though it demands a report of a dangerous disease to a health officer with whom the physician may not be on speaking terms.

EDITORIAL BRIEFS.

THE SANITARY CONVENTION.—Another very interesting convention has been held under the auspices of the Michigan State Board of Health. The convention was called to meet at Pontiac January 31, and remained in session two days. Valuable papers were read by Dr. Jacokes, Honorable LeRoy Parker, Dr. Hazlewood, Dr. Lyster, Dr. J. H. Kellogg, Dr. Hurd, Dr. Yemans, Dr. Wight, Dr. Sheldon, Dr. Morley, Dr. Mulheron, Dr. Avery, Dr. Kedzie, Dr. Connor and others.

SOMETHING RICH.—Our esteemed contemporary, the *Detroit Lancet*, in its report of a recent meeting of a medical society, gets off the following (italics, ours), which is certainly rich, rare and racy.

"Dr. French then gave some notes of surgical cases occurring in his practice. A man had sustained a compound fracture of the metatarsal and phalangeal bones of the foot. Dr. F. sewed up the laceration *and laid him away*. The general health remained good, except for the shock of the accident. After a few days the foot began to turn black. It was then treated with antiseptic dressings until the sixteenth day, when the patient went to his home in Kalamazoo, and was not seen by Dr. French for twenty-five or thirty days, though he was to have secured the services of another physician. At the end of a month he was called again as the patient had become alarmed. He found the foot below the fracture in a sloughing condition, *and he found that he could readily turn it off with very little effort, disclosing a healthy granulating surface underneath. The senation of the sloughing part had very gradually disappeared as the tissue decayed. Within two months the surface was nicely covered with cuticle. He thinks that conservative surgery is often the best.*

"Dr. Connor had a case that did not end so favorably. A young lady hurt her right foot on a loose plank in a side-walk. for a time there was some soreness but no serious symptoms. *Then she had an abscess in the iritis and ulcerative keratitis.* The case at first fell into the hands of a quack, then went to a regular physician, who sent it to him for treatment of the eye complication. *He at once detected pyæmia in the eye and brain, and requested Dr. Wyman to examine the foot, etc.*"

AN IMPORTANT MEDICO-LEGAL QUESTION.—In at least two criminal trials, which have rcently occurred in this State, the question whether in cases of arsenical poisoning, where death results, arsenic should be found in the brain or not, has arisen. In one case, the analyst found from ten to thirty grains of arsenious acid in the stomach and about seven inches of the rectum, and about one and one-half grains in seven ounces of the liver and a small piece of one kidney, or as the analyst computed it, from six to fifteen grains in the entire liver. Analyses showed the absence of arsenic in the brain and in the muscles of the calf of the leg. The defense claimed, and was supported by one witness, that he suspended in water about two-thirds of a teaspoonful of white arsenic (about one hundred grains) and injected this into the throat and rectum of the deceased, for the purpose of preserving the body until a suitable burial casket could be obtained. Granting that this injection was made, would it be impossible for the arsenic thus injected to pass through the walls of the stomach and intestine and reach the adjacent organs, as the liver, after one hundred and five days, which time elapsed before the body was taken from the grave and the stomach and liver removed? This question was answered differently by the experts. Some of the physicians held that arsenic would not pass by diffusion through the walls of the intestine of a dead person, and that the arsenic in the liver must have reached that organ before death, and its presence in the quantity found in that organ was sufficient proof that the death was the result of arsenical poisoning. Others held that the arsenic thrown into the stomach and bowels after death might have passed through the intestine and reached the liver.

On the significance of the fact that no arsenic could be found in the brain and in the muscles of the leg, the experts differed as widely as they did on the question of post-mortem diffusion. The experts for the defense held that, if the large amount of arsenic found in the liver reached that organ before death, arsenic should have been found in every part of the body. They did not claim that arsenic should be found in the brain in every case of arsenical poisoning, but that when it existed in such large quantities in the liver as were found in this case, a detectable quantity should exist in the brain, provided all that found in the liver reached that organ before death. On the other hand the experts for the prosecution held that the absence of arsenic in the brain and in the muscles was of no significance. Two experts held that, on account of loss of vitality of the sphincter ani, injections into the rectum after death would not be retained, and therefore the claim of introducing arsenic in this manner must be false.

It seems to us that when questions of this kind come up in murder trials, the court should appoint a commission to make experiments upon the disputed questions and thus arrive at the truth. It can be very easily determined whether or not any part of an injection into the rectum after death would be retained; and supposing that such an injection should be retained, either wholly or partially, it could easily be determined whether or not any of the arsenic so injected would reach the liver in a given time. The cost of making such experiments would be much less to the county than the cost of a second trial, and in one of these cases in which the question of arsenic in the brain arose, two trials in the circuit court have already been held, and the supreme court has ordered a third trial. Moreover, by these very simple experiments, the truth could be reached, and the prosecution could be convinced as to the guilt or innocence of the accused. The prosecuting officers should dread the conviction of an innocent man just as much as they should the escape of a guilty one. In another murder trial, a physician swore that a glass of milk would completely disguise the taste of a fatal dose of strychnia. The truth or falsity of this might have been easily demonstrated.

OPIUM STRENGTH BY THE NEW PHARMACOPŒIA.—Attention is being called to certain changes in the strength of the opium preparations, and in the proportion of morphine required in opium itself, authorized by the Pharmacopœia of 1880, now just issued. At first view it may appear that startling alterations are undertaken by the recent revision. A hasty comparison of the opium standards of the new pharmacopœia, with those of the old pharmacopœia, may give the impression that largely increased strengths are introduced. But a careful comparison of the new standards, with the strengths actually in use in this country, will show that, for opium itself, the pharmacopœia now recognizes and undertakes to hold fast the strengths that have been in use for many years, only cutting off the extremes of under strength and over strength, while the ratio between opium and its tinctures has been changed not very widely, in the interest of uniformity, and as authorized by the Convention of Revision.

Crude opium, "in its normal, moist condition" is now required to yield "not less than nine per cent. of morphine, when assayed" by the process given. This standard is that of the United States Custom House, and crude opium of less than nine per cent. of morphine, by Custom House assay, is not admitted into this country. By actual trial it is found that the pharmacopœial process of assay of imported opiums gives very rarely less than nine per cent., while its average of results are 11.5 to twelve per cent. of morphine. For any staple article, obtained wholly by importation, standards of strength, and of purity, can have no better general security than the restrictions of the Revenue Service.* Nine per cent. morphine in crude opium coincides with about twelve per cent. in dried opium. The pharmacopœia of 1870 required opium, when dried, to have not less than ten per cent. of morphine, by staples process, a method giving results not differing far from the present required process of assay. That is to say, the present required strength of crude opium, though not higher than legitimate crude opium in use, is one-fifth higher than the previous pharmacopœial requirement. Dealers have not let down crude opium to the minimum strength of the pharmacopœia of 1870, any admixture for purposes of reducing strength being a gross adulteration, strictly in violation of the pharmacopœia. Even powdered opium has not very often been reduced by admixture, and when adulterated, it has doubtless been at the hands of dealers too reckless to regard any assay for percentage of morphine. And it is the sole practical effect of the new pharmacopœial standard of crude opium to guard against illegitimate reduction of strength after importation, and against any failure of the Custom House standards in the future. It will be observed that no maximum limit of strength is given for opium by the pharmacopœia of 1870, or for crude opium by the pharmacopœia of 1880. And in this inquiry as to what will result from adoption of the new standard, it is to be noted that crude opium as strong as fourteen per cent. of morphine, or dried opium as strong as eighteen per cent. of morphine, by the present United States pharmacopœial assay, is of occasional occurrence in dispensing pharmacy.

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*In Great Britain, the law for the prevention of adulterations leaves the purity of teas wholly in the hands of the Revenue Service, with excellent results, large quantities being rejected. In this case, our own Revenue Service does not exclude impure articles, and no small share of the tea rejected in London finds a market in the United States. But the opium obtained in this country is of uniformly good quality and strength.

Powdered Opium, dry, appears as a distinct article in the pharmacopœia of 1880, with both minimum and maximum limit of morphine strength, namely: twelve to sixteen per cent. of morphine, by the same process of assay directed for opium. Authority is given for reducing opium stronger than the upper limit, by mixture with weaker opium, in the preparation of powdered opium. Another new pharmacopœial form is denarcotized opium, a dry extract of powdered opium, denarcotized, and then graduated by addition of sugar of milk, so that it shall contain a fixed proportion of morphine, not above or below fourteen per cent. Neither of these forms was defined in the pharmacopœia of 1870, which provided no maximum limit of opium strength.

We have, then

(1) Opium—the virgin material, moist and unmixed—of morphine strengths having a lower limit only.

(2) Opii Pulvis—dry, graded by mixture of strengths if need be—with lower and upper limits of strength, in the ratio of three to four.

(3) Opium Denarcotisatum—graded by inert foreign material—of a fixed strength, the mean of the percentages of opii pulvis.

The tinctures and the vinegar are to be made from Opii Pulvis, and subject to its variations of strength, that is to limits having the ratio of three to four. A maximum limit of strength of these preparations is first provided in 1880.

The tincture and deodorized tincture of opium, as well as the vinegar and wine of opium, are now to be made of the strength of ten per cent. by weight of opium,—this standard being expressly authorized by the Convention of Revision, subject to the discretion of the Revising Committee. The tinctures, by the pharmacopœia of 1870, contained one grain of powdered opium in 12.8 minims, or by weight, about nine per cent. of the powdered opium. Therefore with opiums of equal strength, these tinctures are to be one-ninth stronger than heretofore. Taking laudanum at an average specific gravity of 0.95, the proportions of the pharmacopœia of 1870 give 8.66 parts of opium for one hundred parts by weight of the tincture. The exact increase, therefore, is from 8.66 to 10.00, or fifteen per cent. This variation, in the ratio of nine to ten, is small in comparison to the variation in the strength of powdered opium of the present standard, a variation within limits as twelve to sixteen. It is still smaller in comparison with the variations in the value of opium permitted by the pharmacopœia of 1870, having no upper limit at all. Moreover, the too frequent practice in dispensing pharmacy, of taking weight of opium moist instead of dry, for the preparation of the tincture, has introduced differences of morphine strength as much greater than the differences due to the new standard of preparation, as the ratio nine to twelve is greater than that of nine to ten. However, the tincture, as faithfully made by the standards of 1880, will generally be a little stronger, than those faithfully made by the standards of 1870,—while some opium tinctures made by the latter standards would be even stronger, and others would be much weaker, than could occur under the new limitations.

To be sure, if tinctures of opium be graduated, each time, from the result of a morphiometric assay, so as to contain the lowest proportion of morphine possible to a pharmacopœial product, the minimum morphine strength would be, for United States Pharmacopœia 1870, 3.75 grains per fluid ounce, or 0.866 per cent. by weight; for United States Pharmacopœia 1880, 5.10 grains per fluid ounce, or 1.200 per cent. by weight; and the increase of minimum morphine strength, 38.8 per cent. The graduation of the tincture of opium, according to the results of a morphiometric assay, to furnish a certain strength of morphine, instead of a certain strength of opium, is a plan presenting tempting advantages of uniformity, and there can be no objection to the presentation of such a graduated tincture, provided it be declared as such. But it must be noted that, before the present Revision, the tincture so graduated, to the minimum morphine strength, would almost invariably be weaker than a tincture faithfully made from the pharmacopœial proportion of the legitimate opium of this country.

The table of Differences of Strength, on page 454 of the present pharmacopœia, contains the following comparisons of strengths of the forms of opium:

	1870.	1880.
Opii Pulvis [dried]	10 or over	12 to 16
Opium [not dried]	about 8	9 or over
Opium Denarcotisatum		14
Tinctura Opii	9	10
Tinctura Opii Deodorata	9	10
Acetum Opii	16.3	10
Vinum Opii	13	10

A. B. PRESCOTT.

MEDICAL NEWS.

We are glad to state that there is some evidence of improvement in the morality of our contemporary, the *Monthly Review of Medicine and Pharmacy*, to whose thieving propensities we referred in our December issue. The *Review* has changed its name to *The Quinologist* and its January number has two articles taken bodily from The Physician and Surgeon, and we were surprised to see that one of the articles is credited to us; the other is without credit. However, we are much encouraged by this evidence of improvement in our brother's sinful nature. He probably went to church during the holidays.

Health in Michigan for December.—The secretary of the State Board of Health reports as follows:

Compared with the average for the month of December in the preceding five years, neuralgia, tonsilitis, and dysentery were more prevalent, and remittent fever, intermittent fever, diphtheria, bronchitis, consumption, and pneumonia, less prevalent, during the month of December, 1882.

For the month of December, 1882, compared with the averages of corresponding months in the preceding three years, the temperature was slightly lower, the absolute humidity slightly less, the average day and night ozone less and the relative humidity slightly more.

A Philadelphia correspondent of the *Medical Herald*, while he praises the learning and ability of Professor Bartholow, states that "as a practitioner among the people he has not met with success in Philadelphia." The same authority states that Drs. DaCosta and Pepper control the consultation practice in the city. He gives the following thrust to one of the schools: "As to turning out good doctors, the Jefferson College merits no especial recommendation. It goes on the quantity plan, rather than the quality. Short term, many lectures, two sessions only, cramming, easy greenroom, and a flowery commencement will stick to the Jefferson Medical College as long as it pays. In this regard she must hand the bouquet to the University College."

In 1879 a German, calling himself Henry A. Lüders, presented to the State Board of Health, of Illinois, a diploma from the University of Göttingen. The diploma was all right but the applicant was not furnished with a certificate to practice. because he could furnish no recommendations as to character, After considerable correspondence, the letters of recommendation were sent to the Board, which then granted a certificate. The man began practice in Collinsville and by various means obtained a good practice. During this time he is said to have brutally murdered a woman in labor and the child. He used a stick and a piece of string instead of forceps and failing to effect delivery by this means, he eviscerated the infant with a case knife, finally hacking it to pieces with the same instrument and taking it away piecemeal. Finally, some one wrote to the dean of the faculty of Göttingen and found that Henry Lüders to whom the diploma belonged, died in Germany in 1878. It was then ascertained that the quack's real name was Lambrecht, a barber, who had, by some means, obtained possession of a dead man's diploma. The state authorities determined to arrest him, but suspecting that all was not right, he fled from the state. Very likely he is now turning a penny in Michigan where it is the glorious privilege of every citizen to practice medicine if he so desires.

CORRESPONDENCE.

MICHIGAN STATE BOARD OF HEALTH.

Reported for THE PHYSICIAN AND SURGEON.

The regular quarterly meeting of the Michigan State Board of Health was held at its office in Lansing, Michigan, on Tuesday, January 9, 1883, the following members being present: Honorable LeRoy Parker, of Flint, president; Henry F. Lyster, M. D., of Detroit; Reverend D. C. Jacokes, of Pontiac; J. H. Kellogg, M. D., of Battle Creek; Arthur Hazlewood, M. D., of Grand Rapids; John Avery, M. D., of Greenville; and Henry B. Baker, M. D., secretary.

The subject of oil-inspection was brought up, and it was stated that it was alleged that much oil is being sold without being inspected, partly because of there not being enough inspectors, and partly because of the system of payment for inspection which allows a man to receive large pay for his labor performed during the first of the month, and toward the last of the month, when the fees get smaller, the work is not done. The object to be attained by the inspection should be to ensure that the oil used by the remote farmer in his cottage, should be as safe to use as that in the city near the inspector; and it was represented to the Board that the cost of inspection could be reduced from $27,000 to $12,000, and yet have all the oil properly inspected, but not without employing more inspectors than are now employed. Dr. Hazlewood and Dr. Baker were appointed a committee to take such action as was considered necessary on the subject of the inspection of oils.

The secretary made his report of work during the last quarter, mentioning the efforts to prevent the introduction of contagious diseases by immigrants; the distribution of blanks and circulars to officers of local boards of health, providing for their annual reports; the general distribution of the Annual Report of the Board for 1881; the issuing of a circular by Drs. Kellogg and Avery with a view to collecting all facts respecting the cause and spread of diphtheria; the preparations for a sanitary convention at Pontiac, commencing January 31; the preparation of articles embracing facts collected respecting contagious diseases in Michigan; also one giving what has been learned by the immigrant-inspection service; also a paper read before a convention at Jackson on "the relations of the State Board of Health to corrections and charities." A resumé of the work of other state boards of health was also presented. It showed that in three counties in California small-pox had been introduced by immigrant cars. The authorities provided an inspection and have for the present stopped the introduction of this loathsome disease. In Michigan the expense of such inspection is much greater on account of the large number of immigrants, and the secretary claimed that the national government should continue to provide means for such inspection, and thus protect the people from Maine to California. Senator Conger and Representative Rich have introduced bills in Congress to appropriate $25,000 to enable the National Board of Health to aid state and local boards of health to prevent the introduction of contagious diseases and their spread from one state into another, by means of the immigrant-inspection service. After reading the above mentioned bill, the following resolution was passed:

WHEREAS, This Board has long been laboring for the restriction and prevention of contagious diseases in Michigan, which depends greatly upon the existence of such diseases in other states and countries; and as this Board has been able to trace several out-breaks of diseases in this state during the past year to immigrant travel, etc., therefore

Resolved, That this State Board of Health urgently requests our members of Congress to endeavor to secure the passage of a bill to appropriate $25,000 for the remainder of this fiscal year and thereafter at about the same rate, to enable the National Board of Health to coöperate with state and local boards of health and quarantines in efforts to prevent the introduction of contagious diseases into the United States, and their spread from one state to another.

The invitation to hold a sanitary convention at Reed City sometime in the Spring was accepted.

Analyses of apple-butter and of the tinned-copper such as is used to make wash-boilers, were presented. The apple-butter is often made in such "copper" boilers when they are new. The acid of the fruit attacks the tin which often contains lead in dangerous quantities, and it is said that the tin lining is eaten off in one or two times using for making apple-butter. The analysis of apple-butter showed distinct traces of lead and tin and a faint trace of copper. That portion of the apple-butter in contact with the cap of the fruit jar in which the apple-butter was sent to the chemist gave very strong reactions for zinc, doubtless derived from the zinc-cap which screws down upon the mouths of "Mason" fruit-jars. The specimen of tinned-sheet copper used in making "copper" boilers and other kitchen utensils was analyzed and the "tin" was found to contain a large quantity of metallic lead, about two-fifths of the "tin" was lead. From one square foot of such tinned surface there was obtained the equivalent of one hundred and fifty grains of metallic lead. The ordinary clothes-boiler such as used in our kitchens, if made of this "tinned-copper" would have two and one-third ounces of metallic lead on its surface, an amount that must have a serious influence on persons who eat acid fruits and juices boiled in such a vessel. Dr. Hazlewood and Dr. Baker were requested to make an investigation into the subject of metallic poisoning by utensils for cooking and storing food.

The city of Hillsdale, Michigan, now requires burial permits. While this subject was under discussion, Honorable George Howell, M. D., a member of the committee on public health of the present house of representatives, read a proposed bill to promote the public health. He received the thanks of the Board. The subject of requiring burial permits and thus securing mortuary statistics before removal of the body of deceased persons, was referred to the committee on legislation with the request to prepare a bill and submit it to the legislature. The Board adopted a resolution commending the effort to secure mortuary statistics before the burial or removal of the body of a deceased person; and declaring that the method is applicable to townships and villages as well as to cities.

Many letters from prominent sanitarians in this and other countries were presented which spoke in a very appreciative manner of the work of this Board.

It was moved and carried that local boards of health be recommended to supply physicians and persons acting as such with blank notices of diseases dangerous to the public health printed on postal cards.

The committee on legislation reported on an act requiring the registration of plumbers. Honorable James Heuston, M. D., Senator, spoke on the subject of the examination of new dwellings before occupancy, and the following resolution was offered by Dr. Baker and adopted:

Resolved, That the committee on Legislation, etc., and the committee on Buildings, Public, Private, etc., jointly, be requested to take into consideration the feasability of the suggestion made at this meeting by Honorable James Heuston, M. D., for a state law requiring all plans for new dwellings to be submitted to the local board of health for approval.

The committee on disposal of excreta was requested to prepare a pamphlet for general distribution, on the disposal of slop-water, garbage, etc., in villages without a sewerage system, and from detached dwellings.

The American Public Health Association has recommended making it a penal offence to communicate a contagious disease. The committee on Legislation was requested to modify the bill so as to name diphtheria, scarlet fever, and small-pox, and get the subject before the legislature.

The special committee on sanitary conventions reported that a sanitary convention was to be held at Pontiac on January 31 and February 1, 1883. Among the subjects to be presented, are papers on the limitation and prevention of typhoid fever, the relation of the medical profession to public-health laws, on toy-pistols, the dangers in dirt, and on the contamination of well water.

The following resolutions (two of them having been passed before) were reaffirmed:

Resolved, That there should be required of all who are to begin the practice of medicine in this state an examination as to their qualifications.

Resolved, That such examinations by the state should be restricted to questions in demonstrable knowledge as distinguished from questions of mere opinion.

Resolved, That, as a public health measure these two resolutions be referred to the president and secretary with a request to do what they can to further the objects of the resolutions.

Auditing of bills and other routine business was performed. The next meeting of the Board will be at Pontiac, January 31, and the next regular meeting will be April 10, 1883.

TRANSLATIONS.

Translations from Russian Journals for The Physician and Surgeon.
BY RALPH D'ARY, M. D., ROMEO, MICHIGAN.

DIPHTHERITIC HEART AFFECTIONS.

BY PROFESSOR LEYDEN.

It is generally known that in diphtheria sudden death often takes place with symptoms of collapse. Some time ago this was ascribed to obstruction of the respiratory tracts from diphtheritic exudations. More lately the condition of the heart, as a possible explanation, has been more carefully observed. But unanimity of opinion did not prevail. Some professed to have found thrombi in the ventricles, others endocarditis; others again—changes in the cardiac muscles. The investigations of

Professor Leyden may help to throw some light on the symptomatology and pathological anatomy of the effects of diphtheria on the heart.

Case I.—A five-year-old child in the Berlin City Hospital died from diphtheria with symptoms of sudden collapse and paralysis of the heart. On superficial examination of the heart (at the autopsy) nothing peculiar was found; but microscopy of the recent cardiac tissues revealed a rather intense fatty degeneration of the muscular fibres. The hardened and stained preparations were again examined and showed, besides the fatty degeneration, a proliferation of cells between the muscular fibres, especially about the blood-vessels. An inflammatory process had therefore taken place in the cardiac muscle.

Case II.—A thirty-two-year-old man was taken with pharyngeal diphtheria and recovered. But soon after pharyngeal paralysis so appeared, and was speedily followed by cough and oppression of the chest. The fever returned, and with it great debility and dyspnoea. The pulse rose to 116–120 per minute, was very small, and intermitted occasionally. Auscultation of the heart showed nothing unusual. The lungs showed a little dullness behind, and bronchial respiration. This probably was caused by a slight bronchopneumonia which the patient had; as the paresis of the throat, caused him occasionally to swallow "the wrong way," and thereby to irritate the air passages. At first a slight improvement took place, then he became worse again and in a few days he died with symptoms of pulmonary œdema.

At the autopsy the heart was found dilated, especially the left ventricle; the apex bulged out in a globular form, the muscles were of a brown color, friable, with localized extravasations. The microscope showed an abundant granular proliferation between the muscular fibres and around the arteries; also small atrophic centres of myocardiac degeneration, in which the muscular substance had disappeared and its place was occupied by connective tissue. In the paralyzed soft palate was found atrophy of the muscular fibres and development of intra muscular connective tissue; the small intermuscular nerve branches were thickened.

A third case was similar to the above. These observations clearly show that in diphtheria there is occasionally acute typical myocarditis, characterized by intra-muscular multiplication of nuclei, and the development of atrophied spots. These latter can only be of inflammatory origin, as they are accompanied by the formation of nuclei and the separation of pigment. The paralysis of the heart must depend on the myocarditis, since there were no changes in the n. vagus or its branches. The myocarditis undoubtedly is of diptheritic origin, and must be looked upon as a carditis from infectious disease. It is true, Leyden could find no micrococci, but neither are they always found in nepbritis of undoubtedly infectious origin.

The cardiac symptoms in diphtheria appear sometimes in the height of the disease, at others during convalescence.

In the first case there is suddenly manifested extreme dyspnœa and restlessness (the lungs remaining in good condition), the pulse is small, the face pale, the extremeties cold. All this increases in severity until death takes place.

According to Leyden too little attention has been paid to the cardiac symptoms occurring during convalescence from diphtheria. They are sometimes easily overlooked and ascribed to general prostration. It should be carefully remembered, that there is danger, when during the stage of convalescence the pulse suddenly becomes small, frequent, and easily compressible; when there are attacks of palpitation, dyspnœa, dizziness, and faintness, whilst objective examination generally gives negative results, the heart sounds remaining clear, the impulse weak, the cardiac dullness not increased in extent.

Sometimes there is a certain galloping rythm of the heart, thus: $\smile\ \smile\ \overset{1}{\smile} - \smile\ \smile\ \overset{1}{\smile}$—, which is a clear symptom of left ventricular dilatation with vibratile contraction. Vomiting in diphtheria has also an especial significance as it indicates an implication of the heart with irradiation on the vagus.

There is no doubt that an accurate knowledge of the cardiac symptoms in diphtheria, is very important for prognosis and treatment. The latter should by no means be simply local, but stimulative from the beginning. All remedies having a depressing or weakening effect, should be avoided, such as large doses of salicylic acid, pilocarpine, or emetics.—Still more important are the cardiac symptoms when they occur during convalescence. When weakness, palpitation, and loss of appetite occur, the patient should not be told, as is sometimes done, to take walks and share in social intercourse and amusements. On the contrary, complete rest and conservation of strength should be advised. We must not forget that we have to deal with a morbid cardiac process, which is but slowly arrested, and we should forbid exciting diet and mental and emotional excitement, but should support the patient's strength by every possible means. If the stomach is good, quinine, bitter tonics, chalybeates and small doses of strychnine are indicated. If the left ventricle is dilated, digitalis, in small doses, is useful. If there is a tendency to vomiting, tincture digitalis should be injected hypodermically.

In conclusion Leyden asserts his belief that the connection between these cardiac affections and diphtheria is analogous to what occurs in other infectious diseases. It is known that in articular rheumatism, which is also considered an infectious disease (?), endo, peri, and myo-carditis frequently occur. In septic diseases, for instance erysipelas, there is also peri, and myo-carditis, likewise in scarlatina, febris recurrens, epidemic meningitis, typhus, etc.—*Med. Obozr.*

TWO CASES OF SALIVARY CALCULI.

BY A. D. GEDANOF.

Calculi formed in the excretory ducts of the salivary glands, so-called salivary calculi, are but rarely met with. Some of the best surgeons do not even mention them in their works. In a practice of eighteen years, I have met with but two cases. It will, therefore, be of interest if I describe these rare cases.

Case I.—Two years ago there came to me a laborer, aged thirty-five, complaining of pain in the mouth. He stated he had had it for two years, off and on; the pain lasting a few days at a time and then disappearing for a while. It never had been very severe. But three days ago, the pain had become so intense that he could hardly masticate, and there was a severe burning sensation in his mouth when he attempted to eat anything salt or sour. On examination I found a considerable and pretty evenly distributed swelling of the parts between the tongue and inner surface of the body of the inferior maxilla, so that the floor of the mouth appeared considerably raised. I noticed an abundant secretion of saliva, and tenderness to the touch. On the left side of the floor of the mouth there was a round ulcer, from which partly protruded a hard body. I took hold of it with the forceps and easily extracted it. It proved to be a calculus of regular oval form, over one centimeter in length, of a dull, grayish white color. It was retained in the ulcer only because it was slightly larger than the circumference of the opening in the mucous membrane, which therefore bound it down.

Case II.—On September 26, 1882, Captain D. consulted Dr. Lehatshèf for pain under the tongue. The doctor found under the tongue a swelling, with a round yellow spot at the apex, which at sight seemed to him an accumulation of pus, but on being touched, proved to be some hard body. I was also invited to examine the patient, which I did in presence of my colleague, and found that under the tongue there was, if I may say so, a second tongue, that is, a red tongue-shaped swelling, of about the consistency of a normal tongue, and reaching symmetrically into both halves of the mouth. The length of the swelling was about two and one-half centimeters. About the middle of its free and rounded anterior border there was a prominent yellow spot, about the size of a pea, and very much resembling a pustule. To the fingers it seemed as firm as bone, and there was nowhere a sign of fluctuation. The submaxillary salivary glands were not enlarged. The patient denied the possibility of the presence of some foreign body; he said the swelling had existed a long time, but since it did not cause him any inconvenience, he had paid no attention to it. The pain had been slight, appeared only occasionally for a few days, with a slight increase in the swelling, which always promptly subsided again. I suggested that it was a salivary calculus and proposed to make an incision and remove it. Both patient and physician readily assented.

Fixing the swelling with the forceps to the right of the calculus, I made an incision from above downwards. A drop of stringy, whitish fluid escaped. Then I removed the calculus, which was shaped like a truncated cone with slightly rounded end. Its length was one centimeter, its thickness at the larger end two-thirds centimeters. It was yellow and had a highly polished surface. On one side was a distinct groove, dividing in two branches like a fork. It was hard, yet brittle, and its interior resembled lime in color and consistency. The patient received no further treatment and when I met him two weeks later, he was quite well.

Judging by the different anatomical position of these stones, I should say that one was located in the ductus Whartonius (from the left submaxillary gland)—the other in the ductus Bartholinus (from the sublingual gland). If another case should present, I should fix the calculus by placing a finger behind it, while making the incision, instead of using the forceps. In that way the calculus could be pressed out of its place as the incision was being made.

The occasional accessions of pain and swelling, complained of by the patients are due, of course, to local acute inflammatory processes, which may occasionally spread to the salivary glands themselves.

The absence of a retention-cyst behind the stone may be explained by the existence of a passage for the saliva between the calculus and the wall of the duct. Probably the fork-shaped groove on the last decided calculus formed part of such an outlet.

According to König, salivary calculi attain to the size of a pigeon's or even a hen's egg. They consist of inorganic and organic materials. The inorganic are chiefly phosphate and carbonate of lime, with a slight admixture of magnesia and chloride of sodium. After abstraction of the salts, the remaining organic matters, under the microscope appear to be composed principally of layers of bacteria with a few salivary cells intermixed. Maas has found ptyalin in the calculi.—*E. Klin. Gaz.*

TWO CASES OF OVEREXERTION OF THE HEART.

The following two cases of acute dilatation of the heart in consequence of excessive muscular exertion present great practical and clinical interest.

The first was a porter, aged thirty-seven, of athletic build, but a habitual tipler; he never had had articular rheumatism.

A year prior to the present attack, whilst he was lifting a heavy burden, he suddenly felt a severe pain in the left side of the thorax and left arm. He was unable to continue work, and was assisted home by his comrades. He felt so ill, had so much difficulty of breathing, with œdema of the face and extremities, that he concluded to enter a hospital. There he remained sixteen weeks. At the end of that time he had so much recovered that he was again able to work at his laborious business. His former strength returned gradually and he finally felt perfectly well. Almost a year later, that is, in October, 1877, he tried for the first time to lift the former quantity of stones; but he was immediately taken with so severe a pain in the cardiac region and left arm, that he could not go home without assistance. The former symptoms reappeared: he had again œdema, cough and râles in the lungs. He once more entered the Charité Hospital. Professor F. found him in a dangerous condition. With voice almost inaudible he complained of difficulty of breathing. The sensorium performed its functions normally, but he was excessively prostrated, his face and extremities were cyanosed, and edematous, especially about the tibia.

His breathing was 38 per minute, with loud expiration, and tracheal râles which could be heard all over the room. He coughed and raised a thin reddish mucus. In inspiration the lower intercostal muscles were being drawn in. The impulse of the heart could not be seen, and was felt in the left linea mammillaris, in the fifth intercostal space; the area of cardiac dullness began at the upper border of the fourth rib and merged below into that of the liver. To the left it extended two and one-half centimeters beyond the linea mammillaris; to the right two centimeters beyond the right parasternal line. The contractions of the heart were irregular, 148–160 per minute; the sounds were weak; the systole accompanied by an indistinct sound resembling a murmur. The pulse was small, weak, irregular, and uneven. The tongue was cyanotic, but clean and moist. He had no appetite, but had great thirst. The abdomen was tympanitic and tender on pressure in the hypochondria. The dullness over the liver was much intensified. In the hypogastrium the percussion sound was intensely dull. His urine was dark red, with brick sediment, a little albumen and uric acid. Otherwise normal. His temperature was 37.5.

Professor F. diagnosed acute dilatation of the cardiac cavities, and relative insufficiency of the mitral valve. Cardiac stimulants were prescribed, and in a few days, diuretics. Towards the 30th of October his condition improved so far that he could walk or lie with comfort on either side, and sleep. His urine had increased from two hundred and fifty centimeters (when admitted to the hospital) to 4,000–5,000 centimeters in the twenty-four hours. (Acetate of potash). The pulse remained irregular, uneven, 100 per minute. The cardiac dullness now occupied almost its normal region, and there was no systolic murmur. This comparatively favorable condition was observable when the patient was lying in bed. But whenever he arose and tried to walk a few steps, severe dyspnoœ at once set in with sudden cyanotic coloration of the face and extremities. It was many months before the patient was able to ascend the stairs leading up to his ward. In June, 1878, it was still possible to discover irregularity and unevenness of the pulse, etc. Soon after the patient was dismissed.

He presented still greater interest when on March 30, 1879, he again entered the hospital. He then had perityphlitis, with fever and gangrene of the big toes. This could be accounted for only by atrophy and weakness of the heart. The further course of the affection confirmed this opinion. When the line of demarkation had already begun to show on the toes, the patient began to complain of cold and numbness in the hands. They had become purple up to the middle of the metacarpus, were a little edematous, and sensitive only on deep puncture. The patient was given valeriana cum castoreo, in order to stimulate the heart to action, and a favorable change took place in a few hours, all the above symptoms disappearing.

According to Professor F., gangrene was beginnning to develop in the hands, as it was developing in the feet, owing to the excessively weak action of the heart, and the cardiac stimulants cured the gangrene. Bardeleben, in his work on surgery, points out the same cause for symmetric gangrene.

Another case of excessive exertion of the heart, which ended fatally on the twentieth day, was similar to the above in its symptoms, but was different in its etiology. The patient had entered the hospital on the 1st of December, 1875, and from his anemnesis it clearly appeared that his disease set in in consequence of his having worked very hard for four days carrying stones. Therefore his disease did not develop suddenly from lifting an excessive weight, as in the above case, but after prolonged muscular exertions. In this difference the author sees sufficient grounds for distinguishing the first case as one of "acute over-exertion of the heart," and the second as "chronic over-exertion of the heart."

The autopsy in the above case showed the valves of normal size, but insufficient for the enlarged cavities of the heart. There was fatty degeneration, especially of the inner layers of the muscles, and more so in the right than in the left ventricle.

It seems probable that the irregularity and unevenness of the heart's action depended on the dilatation of the ventricles, whilst the fatty degeneration developed during the last two weeks of the patient's illness.—Professor Fraentzel in Charité Annalen—*Med. Obozr.*

Translations from German Journals for THE PHYSICIAN AND SURGEON.
BY M. E. PAGELSON, M. D., BERLIN, GERMANY.

CHRONIC DIPHTHERITIS OF THE THROAT.

With the frequency of diphtheritis at the present time, those cases are rare in which the disease is not readily diagnosed if situated in the lower pharynx where it can be readily seen. Cases have frequently been called diphtheritic which were only extended inflammations of the follicles or superficial ulcerations, such as occur during the course of the exanthemata. Enough attention, however, has not been given that form in which the upper part of pharynx, the posterior surface of the soft palate and that part of the throat hidden by it is the seat of the disease. This is due either to the fact that the disease appears only here, the lower part of the throat remaining entirely free from it, or that the disease attacks the lower part first, subsequently extending higher. Often the only symptoms, and these appear late in the course of the disease, are those produced by its extension to the middle ear. The causes of this course of the disease are the following. In this position the loosening and removal of the exudate is prevented by the contact of the parts as well as by the want of the removing muscular power brought into action lower down in the act of swallowing. Then there is the difficulty of doing this artificially as by gargling, mechanical means. The retention of the poison supports a continuance of the infection so that the disease constantly attacks new places. There is the danger, then, that reparation does not take place after exfoliation of the membrane, but the ulceration spreads and the disease becomes chronic. In this way the ear may become affected. This condition is more or less known and is seldom overlooked as the large amount of exudation can not fail of being noticed by the patient as well as by the physician.

Less known and described is a second form ot chronic diphtheria, the description of which is the object of this paper. I have observed twelve cases and gradually satisfied myself as to the etiology. Among the large number of cases of ulceration of the pharynx treated by me, some of which were plainly of syphilitic origin, others tubercular, were some very similar to the first in appearance but about whose nature I was in doubt. They were rather deep ulcers with a yellow spotted surface, surrounded by red and swollen mucous membrane, at times progressing rapidly and even causing great destruction of tissue. In some cases I first discovered the disease by rhinoscopic examination after it had been differently diagnosed by several physicians because the ulceration was not visible below the soft palate. The inter-current affection of the ear or pains in the eyes had brought the patients under my care. The latter were present in almost all the cases. The patients always complained of a severe pain starting in either eye and usually spreading over one side of the head. It was particularly severe when the ulceration extended to the basis cranii. In some cases the ulceration extended as low as the beginning of the æsophagus. the soft palate was infiltrated and if torn, as by traction during treatment, badly healing wounds remained. There were severe local pains with difficulty of swallowing, also loss of flesh and strength usually without febrile symptoms. The striking similarity between these ulcers and those of syphilitic and of tubercular origin, led some of my colleagues to direct their treatment to these diseases and I also in one case tried an antisyphilitic course without effect. In each case I found that the patients had suffered from diphtheria, or at least the history of the case made its existence probable. The existing constitutional state, scrofula, tubercle etc., causes the disease to assume this destructive form.

In the treatment two stages of the disease must be carefully distinguished. As long as the surface of the ulcer is spotted, the surrounding tissue strongly infiltrated and the exudate copious, astringents and caustics are strongly contraindicated and antiseptics must be used. The virus undoubtedly present must be killed or rendered inert. Hence there must be a most careful removal of all exudations and exfoliations. Too much can not be done in the way of gargles and of nasal and post pharyngeal douches. At times it is necessary to swab out the space with a sponge or cotton.

Among the remedies a strong solution of carbolic acid, five to eight per cent. with powdered iodoform and boracic acid heads the list. Iodoform is of special service and is best applied by means of an insufflator. This strong solution of carbolic acid of course must only be applied directly to the ulcer, but a weaker solution can be used for inhalation. Chlorate of potassa has little effect. Iodoform may be safely used even if there is still some inflammation, stronger solutions of carbolic acid are badly borne, weaker ones are allowable.

Under this treatment the secretion decreases and the œdema of the surrounding membranes disappears. When gradulations appear caustics may be applied and the antiseptics used only in the washes. All reachable places of the ulcers must be touched with the solid stick of silver nitrate, which in skillful hands can be carried to the upper part of the posterior nares, to others solutions must be applied. Galvano-cautery often acts well and in some cases may be applied early, materially shortening the treatment. The white heat usually causes no reaction in the surrounding parts. We expect from it prompt destruction of the ferments and therefore can often use it to advantage in the first stage.

It is not advisable to depend on antiseptics alone. Though with them alone the object is attained after a time, the treatment lasts much longer as they prevent rather than further the formation of granulations. The constitutional state must of course be taken into consideration, but, in syphilis for example, it is often advisable to direct treatment to that because of the low condition of the patient which will not well bear the specific remedies. Besides, the ulcers heal well under local treatment alone. At a later period, when the general health has been improved, measures may be taken to eradicate the specific poison.—Dr. Walb. Bom. in *Berl. Klin. Wochensch.*

CARBOLIZED IODOFORM.

The correctives which are supposed to cover the intense odor of iodoform, and which as far as I know have been thus far used, decidedly do not fulfill the demands. The information may therefore be of interest that an addition of carbolic acid can be highly recommended as a corrigens. If ten grammes of iodoform are rubbed up with 0.05 grammes of carbolic acid and two drops of oil menth. pip. added, the unpleasant odor is entirely covered and is not again developed even under a higher temperature.

A result not quite so favorable is obtained when carbolic acid is added to iodoform ointment, but even here the acid is much better than Tonka bean, bals. peruv. or oil menth. alone. How large a quantity of carbolic acid can be added without interfering with the progress of the wound I do not venture to decide.—Dr. Carl Schork. in *Berl. Klin. Wochensch.*

BOOK REVIEWS.

A LARGE FIBRO-CYST OF THE UTERUS AND OVARIAN CYSTOMA, CO-EXISTING WITH PREGNANCY; OPERATION; RECOVERY. By Walter Coles, M. D., Saint Louis.

Dr. C. reports here an exceedingly interesting case. A fibrocyst of the uterus developed simultaneously with the growth of a fœtus and led the physician to predict multiple pregnancy. However, at the time of delivery it was found, after the birth, that the uterus was empty. This caused the attending physicians to suspect extra-uterine pregnancy. Dr. C. was summoned and decided that a tumor—either uterine or ovarian—was present. After some months the abdomen was opened and a large fibro-cyst of the uterus, and one ovary, which had undergone cystic degeneration, were removed. The walls of the uterine cyst were two inches thick. Septicæmia with suppuration of the parotid gland followed. But by means of thorough drainage and frequent washings, recovery was secured.

F

FEMALE DISEASES, THE RESULT OF ERRORS IN HABIT AND HYGIENE DURING CHILDHOOD AND PUBERTY—WITH REMARKS ON THE TREATMENT OF RACHALGIA WITH IGNI-PUNCTURE. Reprinted from transactions of Georgia State Medical Society. By R. J. Nunn, M. D., Savannah.

Dr. Nunn tells us but little that is new; but the influence of female dress upon health is an important subject and one that needs frequently to be brought out prominently. Dr. W. holds that climate, luxurious and sedentary habits, rocking chairs and stiff corsets, want of proper exercise, over-education, school-crowding, late hours, sudden exposures, etc., are the chief causes of diseases peculiar to women. Nearly all physicians agree on these points. Under the head of diet, Dr. N. is led into some queer statements by following, without question, Salisbury and Cutter, who have written so much nonsense on this subject. To prove that we eat too little animal food, Cutter is quoted as stating that we are furnished with twelve teeth fitted for vegetable, and twenty fitted for animal food. Wonder if Dr. Cutter does not use his incisors for biting bread, as well as for tearing flesh from a bone. It is stated that, while in normal digestion starch is converted into sugar, if digestion is arrested the starch ferments with the production of carbonic acid gas, and this gas, on the authority of Dr. Salisbury, "acts as a local anæsthetic upon the villi and muscles of the intestines, paralysing them and thus further arresting normal absorption." If this be true, drinking-waters charged with carbonic acid must speedily destroy life by paralysing the intestines. Again the venous blood of the intestines contains carbonic acid gas, which should produce complete paralysis. According to Dr. Cutter's tooth argument the Egyptian, Englishman and Esquimau should all have the same proportions of vegetable and animal food in their daily rations. The Englishman while dwelling in his native land or while sojourning in India may have neglected to change the number or kind of his teeth; but experience has taught him that he dare not consume the large amounts of beef in Calcutta that he daily disposes of in London.

THE FUNCTIONS AND DISORDERS OF THE REPRODUCTIVE ORGANS IN CHLIDHOOD, YOUTH, ADULT LIFE AND ADVANCED LIFE, CONSIDERED IN THEIR PHYSIOLOGICAL, SOCIAL AND MORAL RELATIONS. By William Acton, M. R. C. S., late surgeon to the Islington Dispensary, and formerly externe to the Venereal Hospitals, Paris, etc. Sixth edition; cloth; pages, 267; Philadelphia, Pennsylvania: Blackiston, Son & Co., 1883. For sale by Sheehan & Co., Ann Arbor.

It is refreshing to read such a work as this of the good old type, when the doctors did not hesitate to preach a little with their much practice. The high moral tone of the book is certainly by no means the least commendable feature of it. The whole subject is discussed in a most plain and instructive manner. The young man is advised to be continent, and by this is meant not only continence in act but in look and in thought. It is a truth that our author states when he tells us that the young man who stops just short of seduction injures himself as much and probably more than the one who visits the house of shame. Long engagements with the familiarities which are likely to arise, leading to continual sexual excitement, is a frightful source of most disastrous diseases in the male reproductive organs. The unmarried man must be continent; the married man must be moderate in his sexual relations.

Every derangement of the male reproductive organs is taken up, discussed concisely and the plan of treatment indicated. Masturbation, spermatorrhœa and impotence, those cases in which the quack finds his readiest dupes, are robbed of many of their horrors and careful plans of treatment given. These are subjects upon which the family physician should be better posted than the majority of them are, and we know of no more reliable treatise on the subject than the one now before us. Many of our older readers already possess some of the former editions of this work, and to all others, we would say that it is a book, which no physician in general practice can afford to be without.

EARLY AIDS IN INJURIES AND ACCIDENTS. By Professor Friederick Esmarch, Professor of Surgery at the University of Kiel, etc., etc. Translated from the German by H. R. H. Princess Christian. Cloth; pages, 117. Philadelphia: Henry C. Lea's Sons & Co., 1883. For sale by Sheehan & Co., Ann Arbor.

This little book consists of some lectures given to a non-professional audience at the Samaritan School at Kiel in March, 1882. The aim is to give directions as to what should be done in case of injury until the surgeon arrives. While the lectures were given to non-professionals, surgeons will find the book full of directions for simple devices that will often be of great value to him. While proper instruments are being obtained, the surgeon, especially the beginner, is at a loss to know what had best be done. These lectures answer this question for him.

SELECTED ABSTRACTS.

NEW REMEDY FOR SYPHILIS.

Professor Liebreich brought forward, at the last meeting, but one, of the Berlin Medical Society, a new drug for the treatment of syphilis by the subcutaneous method. This drug rejoices in the name of hydrargyrum formidatum, and is, therefore, merely a different form of the old cure for syphilis. The mode of its preparation was not stated; chemically it belongs to the amide group, in whose structure the monivalent amidogen $(NH)_2$ plays an important part. Liebreich was led to think of this new preparation from the notion that the ordinary amides of the body, of which urea may be regarded as the principal one, pass out of the organism in an undecomposed state; when, however, an amide is in combination with a metal, decomposition readily occurs, and the metal is reduced and deposited. Liebreich repeated his experiment before the Society, and showed that these conjectures were quite true for the metal mercury. It is supposed, therefore, that the formamide of mercury, after the hypodermic injection, undergoes disintegration; and so the mercury is set free, and is able to exert its well-known power over the lesions of syphilis. The preparation is easily soluble in water, is of neutral reaction, does not cogulate albumen, is not precipitated by caustic soda, and the presence of mercury can be demonstrated by means of sulphide of potassium. The drug, when injected under the skin, produces its effects very surely and rapidly. This is not regarded as a disadvantage, for the medicine is said to be easily borne, and has never produced salivation in Liebreich's hands. There is very little pain attendant on the injection, which has never excited any inflammation. From a half to a whole of a Pravaz syringeful (a one per cent. watery solution) may be injected twice or thrice daily. Liebriech looks on the preparation as the best we yet have for subcutaneous injection.—*Medical Times and Gazette.*—*Medical News.*

TREATMENT OF ANASARCA.

It is known that unpleasant results, or rather accompaniments, occasionally occur in the drainage treatment of anasarca, even by Dr. Southey's improved method. Dr. Adam, of Melbourne, (*The Australian Medical Gazette*, of August), thinks that there are leading factors causing the irritation of the skin in cases of anasarca, which result frequently either in simple erythema, erysipelas, or abscess. In the first place, in an œdematous limb the skin elements become compressed and their vitality is lowered by interference with their nutriton. This is well illustrated when an ulcer forms, cicatrisation will not take place until the œdema be reduced—in other words, until nutrition is restored to the skin elements, when the sore usually heals kindly, only to break out again as the dropsy reaccumulates. The second factor appears to be the presence of an irritating body —the dropsical fluid—which possesses a weak alkaline reaction. Now it seems probable that any fluid possessing a positive reaction (either acid or alkaline) flowing over a skin that is badly nourished, and whose epithelium is put on the stretch, will be quite a sufficient irritation to cause untoward complications. Taking this view of the case, Dr. Adam, after some previous trials, finally has adopted the following method, which he thus describes: "Moderately sized Turkey sponges were thoroughly soaked in saturated solution of boracic acid, squeezed dry, and applied over the punctures, and kept in position by a turn of bandage lightly applied. These sponges require to be removed in the course of two or three hours, and the accumulated serum squeezed out and again soaked and re-applied. In this manner a couple of pints or even more of serum could be drained in the course of twenty-four hours." In all the cases Dr. Adam tried this plan there was not the slightest trace of irritation of the skin. Of course, there is no method but which will have its disadvantages, and this is no exception to the rule. The attention required, although great, is not insurmountable. For any case in which this method would be admissible would want considerable nursing, and no extra labor would be involved by it. Perhaps the greatest disadvantage is that the punctures required to be repeated nearly every twenty-four hours. But this is not so painful as may be supposed, for the skin, by tension and loss of vitality, is rendered less sensitive. Another disadvantage is that in some exceptional cases only a drop or two of fluid follows the puncturing. The cause of this probably is that the serum contains too much albumen, or it may be, as Professor Spencer calls it, solid œdema. Dr. Adams' most successful cases as regards draining were those in which the dropsy was due to cardiac insufficiency. Œdema due to Bright's disease as a rule did not drain so easily.—*Dublin Journal of Medical Science.*

CHICKENPOX OR SMALLPOX.

In his report on the Gloucestershire Combined Sanitary District, Dr. Bond discusses at some length the probable relationship between smallpox and chickenpox. The first case of the outbreak on which Dr. Bond comments was that of a tramp who contracted smallpox. He was isolated in the infectious hospital. He stated that he had been vaccinated about twelve years ago, and he had one good mark on each arm. This was the first of six cases which happened in the Cirencester Urban District. Three other cases occurred in a cottage situated about a mile from the town. The first was that of a boy, who was at once removed to the hospital; and, when Dr. Bond saw him a few weeks afterwards, he had all the appearances of a patient recovering from a very mild attack of smallpox, or from what some people would call a very well marked attack of chickenpox. Ten days afterwards, two adult labourers, who were lodging in the cottage at the time the boy was removed from it, were attacked with a general eruption, which exhibited still more distinctly the characteristics of mild smallpox.

These were removed to the hospital; and shortly afterwards the father of the boy and another lodger were also attacked with a milder form of the same eruption, but it was not judged necessary to remove them to the hospital. The mother and another lodger were also attacked.

There are several points of interest connected with this outbreak. In the first place, was it genuine smallpox? Dr. Bond is of opinion that it was; but he admits that the first of the cases—the boy—would have passed fairly current as an illustration of what, by most medical men, would be called chickenpox. As to the two laborers, Dr. Bond has no hesitation in saying that, if they had not smallpox, he does not know what the disease was; but the type was unquestionably a mild one. All the six cases which occurred in connection with this cottage were reported to have been vaccinated in infancy; but none of them had been re-vaccinated except the mother, who had two good marks; *and in all cases the severitg of the attack was in an inverse ratio to the goodness of the vaccination marks visible.*

Presuming that this was an outbreak of smallpox, Dr. Bond discusses whence the infection came. There had been several scattered cases of disease, which had been treated by the practitioners who attended them as ordinary chickenpox; but there was no evidence to connect his case even with one of these, any more than with the infection of distinct smallpox; and yet it seems clear that his case was the origin of all the others at the cottage. Eight days after the removal of this boy to the hospital, a case of severe smallpox occurred in the town. No source of infection could be discovered, except that the girl had been in the company of a young woman who some months previously had an attack of "chickenpox."

Dr. Bond then discusses the probable relation of this with the earlier cases; but he arrives at no satisfactory conclusion. What appears the most probable was, that the infection of what people call chickenpox, but which Dr. Bond prefers to call mild smallpox, was prevalent in the neighborhood at the time; and that, for some not very evident reason, it attacked these persons with unusual virulence, and with a virulence, indeed, which in one case, could leave no mistake as to what was its true nature. But, if this assumption be correct, what becomes of the distinction between smallpox and chickenpox? And how far are we justified in looking on this latter affection as an innocuous one? That it is innocuous in the large majority of cases, both to the individual and to those with whom he is in contact, seems unquestionable; but, if these cases bear the interpretation Dr. Bond has put on them, it becomes a grave question whether even the mildest cases of so-called "chickenpox" should not be treated, if not with as much care in regard to isolation as smallpox, at any rate with much more care than it generally is.

A somewhat similar case occurred in the Westbury district. In this instance, the subject of the disease was the wife of the keeper of a small beerhouse in an unfrequented part of a forest. The patient asserted that she had been vaccinated, and also revaccinated when about twelve years of age; but Dr. Bond could only find two poor marks on the left arm. The most searching inquiry failed to elicit any evidence to show how the disease could have been imported into the house, which, though nominally a beerhouse, was so entirely out of any thoroughfare, that it could scarcely be used as a house of call by wayfarers. Both the keeper and his wife most strenuously denied either having been away from it, or having had anyone in it, for more than a fortnight previous to the outbreak, who could have brought the infection. What seems equally singular is that, although there were seven other persons living on the premises, and although, when Dr. Bond visited them three weeks after the patient was taken ill, which was immediately after he heard of the case, not one of them had been revaccinated, yet the disease did not spread. It is also deserving of notice that, in a cottage which adjoins the one in which this case was then convalescing, Dr. Bond found a child of about nine years of age with an eruption which would be ordinarily designated as chickenpox. Dr. Bond could not discover that any other cases of chickenpox had existed in the neighborhood; and the coincidence of these cases is suggestive, when considered in connection with the Cirencester outbreak.—*British Medical Journal*, October 28, 1882.—*American Journal of Medical Sciences.*

GELSEMINUM SEMPERVIRENS IN TETANUS.

Dr. J. Marion Sims reports the following case: Early in September, 1880, he was called to see a strong, healthy mulatto woman, twenty years old, who was suffering from well-marked tetanic convulsions, caused by a broken bit of glass, on which she had trodden two days previously, and which was imbedded in her heel. He administered chloroform to enlarge the wound and search for the broken glass. It was impossible to anæsthetize her profoundly, and her foot was forcibly held by strong assistants while he made free incisions, but failed to find the fragment of glass. The wound was then filled with morphia, and a common poultice applied; and a cathartic was given which acted promptly. Knowing well the inefficiency of chloroform, chloral, and opiates in tetanus, he determined to try the effect of the gelseminum sempervirens, because of its well-known power of relaxing all voluntary muscles. He therefore ordered twenty minims of fluid extract of gelseminum every two hours, alternating with the same quantity of liquor potassæ at the same intervals. There was great difficulty in deglutition, but milk and soups were taken in small quantities frequently. On the morning of the second day there was a slight improvement in the rigidity of the jaw, and the general spasms occurred only every three or four hours. But, as the day advanced, the jaw became more rigid, and there were violent and painful contractions of the muscles on the front and back of the chest. The general spasms also became more frequent, and sometimes occurred during sleep. The dose of gelseminum extract was then increased to forty minims every two hours. During the third day there was a marked improvement in both tonic and clonic spasms; the medicine was continued in forty-minim doses. By the close of the fourth day the rigidity of the jaws was almost entirely relieved, and the general spasms recurred at longer intervals, and with diminished violence. After this period, the improvement was rapid and regular, and the dose of gelseminum was reduced to twenty minims, at which it was continued until full convalescence. No remedy of any potency was used after the first six hours but gelseminum, and there can hardly be a doubt that the cure was the result of its use. The extract was given for a week in amounts closely approximating half an ounce to an ounce every twenty-four hours; it produced no other sensible effect than that of controlling the spasms and arresting the disease.—*British Medical Journal*, December 23, 1382.

INFANTILE CONVULSIONS.

The adopted and regular treatment of M. Jules Simons, of the Hospital des Enfants Malades, for infantile convulsions, is as follows: On arrival, the first thing he orders is an injection of salt and water, salad oil, or glycerine, or honey, which he administers himself, as he has too often observed that the parents or the nurse have already lost their wits. If the teeth can be opened sufficiently, a vomitive is given, which clears the stomach of any food that could not be digested—the most frequent cases of convulsions. However, the attack continues but soon ceases on applying a handkerchief, on which a few drops of chloroform are poured, to the mouth, which the child inhales largely. If the convulsions reappear the anæsthetic is renewed, and the child is placed in a mustard bath for a few minutes, and then wiped dry and placed on his bed properly wrapped. Chloroform might be again administered if, after an interval, the child was seized again, and before leaving the nurse, M. Simon prescribes a four ounce potion, containing sixteen grains of bromide of potassium, one grain of musk, and a proportional preparation of opium, for he does not believe that the brain is congested in these attacks, it is rather excited, and the opium acts as a sedative. A teaspoonful of the mixture is given several times a day. On the following days the child is generally restless and irritable and ready to be attacked again, but a small blister about an inch square is applied to the back of the neck, and left on about three hours, when it is replaced by a poultice of linseed meal, and gives very satisfactory results. M. Simon, in terminating, says, "such is the treatment that I have instituted in my practice of every day."—*Medical News.*

THE PHYSIOLOGICAL ACTION OF HAY.

A paper has been communicated to the Académie des Sciences by M. A. Sanson on a subject which has not, at present, a direct bearing on human therapeutics, but which is, nevertheless, of considerable interest to those who have to provide food for horses, a class which probably includes most of our readers. The object of M. Sanson's researches was to ascertain whether hay does or does not possess the stimulant properties which have been ascribed to it. If such an influence is exerted it should be revealed by changes in the neuro-muscular excitabillty of the animal, and this, therefore, has been tested by the induced current, before and after the ingestion of a definite quantity of hay, or of its active principle, which has been isolated. The conclusions reached are as follows: The pericarp of the fruit of the grasses which are cultivated for hay contains a substance soluble in alcohol, which possesses the property of exciting the motor cells of the nervous system. This substance, the existence of which has been suspected by some and denied by others, is not, as has been supposed, identical with the odorous principle of vanila (vanilline), and indeed has no analogy with the latter. It is a nitrogenised material which seems to belong to the group of alkaloids. It is uncrystallizable, finely granular, and brownish in color in the mass. Its composition seems to be $C_{50}H_{21}NO_{18}$. M. Sanson proposes to call it avenine. All the cultivated grasses seem to contain this substance, but certainly in different degrees. The differences, however, seem to purely quantitative, the substance itself is identical in all the varieties. The quantity does not depend solely on the variety of the grass, but also on the locality in which it has been cultivated. When the proportion is less than nine per cent. of air-dried hay, the dose is insufficient to cause a distinct increase in the neuro-muscular excitability of the horse, but when this proportion is exceeded the result follows with certainty. The amount is not directly indicated by the color of the hay, nevertheless the dark varieties as a rule contain more than the light. The alkaloid is sometimes not present in the light, but it is never absent in the dark varieties. The effect is produced more promptly by the isolated active principle than by the whole hay, but in each case after commencing it goes on increasing for a certain time and then lessens and disappears. The total duration of the recognizable effect is about one hour per kilogramme of hay ingested.—*London Lancet.*

THE DETECTION OF BACILLI OF TUBERCLE IN THE BREATH OF CONSUMPTIVE PATIENTS.

Dr. Smith (*London Lancet*) states as follows: "By the following simple method I have succeeded in demonstrating with facility the presence of bacilli of tubercle in the breath of patients suffering from true tubercular phthisis. For which purpose I allow the patient to breathe, at frequent intervals during the day, through two thin sheets of pyroxyline or gun-cotton, one layer in front of the other, and both of which are placed in the outer compartments of an ordinary 'pepper duster' respirator. The cotton when so arranged will act as a double filter—the external layer removing from the in-going air all the suspended particles, such as dust, micro-fungi, starch, etc., which are always more or less present in it, and which it is desirable to exclude; the internal layer retaining only those particles which come from the lungs—namely, micrococci, bacilli, and some epithelial scales. It is, therefore, in the layer which has been next to the mouth of the patient that I seek for the bacilli peculiar to this disease. This I do by converting the pyroxyline into collodion by dissolving the former in a mixture of rectified spirit and ether. By this means the whole of the cotton fibre dissolves, but the organisms which have been emitted from the lungs are unacted on by the menstruum, and remain suspended in it, but not visible to the naked eye.

To render the bacilli manifest, my plan is to pour the thin collodion thus formed on a microscope slide and allow the fluid to run uniformly over the surface of the glass, then immediately to turn the glass on one of its edges, that only the merest film of collodion may remain on the glass. The thinner the film produced the more successful will the experiment be. The film is then to be stained. This may be done by one of the methods well known to the profession, as that of Ehrlich or of Heneage Gibbes. I have had excellent results from the former."

NATIVE MIDWIFERY IN RANGOON.

The following case which occurred in my practice, illustrating the barbarous custom among the Burmese in accouchement, may be interesting, and may lead to stringent means being adopted to put a stop to it. On Saturday, November 25th, I was called to the accouchement of a woman across the river at Dallah; on arriving there, I found the woman very much exhausted, and in labour-pains. On inquiry, I was told that she was in strong pains for the past four days; and on making an examination of the abdomen, I found a tight band encircling the body above the umbilicus. It was with great difficulty that I could get that removed, and it was only by my threatening to leave that my order was obeyed. On examination by the vagina, I found the os dilated to the size of a shilling. I used manual dilatation and ergot, and ruptured the membranes, and rapidly brought the head down on the perinæum. As the woman wished to attend to the call of nature, I retired to the next room, and on returning found the woman again tightly bound up. As I could not get the people around to remove the bandage, I told them to give her a little rest, and retired to the next room, where I could hear everything that was going on. Hearing a good deal of noise and commotion, I went into the room, and witnessed but for an instant the process of stamping the child out. Several women were arranged alongside of the woman. One then jumped upon the body, and stamped vigorously upon the abdomen; the woman's legs were apart, and several women were watching the effect, and made an exclamation in chorus each time the head protruded from the vagina, amidst the shrieks of agony of the poor victim. In the short time I witnessed this, I saw that the perinæum was ruptured right up to the anus. I caught hold of the woman and swung her off, when the next woman jumped on. I removed her also, when a third took her place. They were so excited, that they were more like maniacs than sane people. When I found I could do nothing with them, I took up my midwifery-case, and walked out. In spite of such extraordinary treatment, the woman is still living, but far from well. Another case has just come to my notice of a primipara, in which the woman was in lingering pains for four days, and then the stamping process was adopted, resulting in the birth of a still-born child, and the immediate expiry of the woman. This occurred in the same place. In concluding, I may remark that the result of death in the second case, was, most probably, rupture of the uterus; whereas, in the first case, death was averted through the child being far advanced into the second step.—Dr. Ady in *British Medical Journal.*

EXCITATION OF THE HUMAN BRAIN.

Sciamanna (*Arch. di Psichiatria*, 1882, p. 209) had the opportunity of applying both faradic and galvanic stimuli to the brain (chiefly through the dura mater) of a man who, in consequence of an accident, had lost part of the right parietal bone.

Excitation of the middle of the ascending frontal convolution produced contraction of the masseters and closure of the jaws; of the lower third of the ascending parietal, rising of the left ala nasi and corner of mouth; of posterior central fissure (between ascending parietal and inferior parietal lobe), flexion of arm and raising of eyebrow; of posterior portion of plica supramarginalis (near inferior temporal convolution), rotation of head to left, movements of orbicularis palpebrarum, of tongue, and eyebrow.—*Brain*, January, 1883.

ON DISCHARGES OF PUS FROM THE MALE URETHRA WHICH ARE NOT GONORRHŒAL.

BY TOM ROBINSON, M. D.

The practitioner of medicine must frequently meet with cases where there is a copious muco-purulent discharge from the male urethra, which, accepting the patient's statement, is not due to indiscretion or the rupture of the marriage vow; and it is with a view to investigate this state that I write this paper. We accept, as a matter of indisputable medical knowledge, that the female vagina and urethra may pour out a purulent discharge, which discharge is, without any doubt, accepted as due to a pathological state of the feminine mucous membrane, and in no wise reflecting a stain on the fidelity of the sufferer. But, if a male consults us with an oozing from the urethra, we are often apt to disbelieve his protestations, and stigmatise him as an unfaithful husband, if he be married, and an untruthful patient, if he be single. We speak daily of discharges from the mucous membrane of the nose, throat, and elsewhere, as being catarrhal; but the male urethra, what can it suffer from but gonorrhœa? The first instance which led me to investigate this subject, came under my notice in the following manner. A gentleman of the legal profession consulted me with what, to all external appearance, was gonorrhœa. He was forty years of age, fair complexioned, and married. He told me that during the pregnancies of his wife he always had a similar condition. This statement I should have accepted with great caution, had it always occurred about the parturient period; but coming on at the early months of pregnancy, and on several occasions, compelled me to attach importance to the statement, and I may say, I have seen this gentleman twice since with the same condition, always taking place during his wife's pregnancy. The following notes from my case book will afford another example of a discharge, which came from an internal cause.

J. B. H., aged forty-two, a man with gouty history, but without ever having true manifestations, was quite grey, had worn down teeth, and tophi. I had attended him on several occasions for gastric catarrh, and eczema of the infra-orbital regions. He was in the navy, and had been at sea for some time. On coming ashore, he had lived freely, and drank rich wines. At the end of a week, he consulted me for a very profuse discharge from his urethra. The discharge was probably more albuminous than is seen at this stage of true gonorrhorœa, and although there was considerable smarting on passing urine, it was not the urgent scalding which goes with the early stages of gonorrhœa. His urine was loaded with lithic acid and he denied having had sexual intercourse. Four days on barley-water, milk, soda-water, and broths, with cooked vegetables, and frequently repeated doses (half a drachm every four hours) of acetate of potash, and a goblet of Pullna water every morning, relieved him completely of his trouble.

Men with enlarged prostate frequently suffer from muco-purulent discharges from the urethra. Organic stricture is also accompanied by profuse oozing. The cases which we call gleet, go on for many years, are most difficult to cure, and are sometimes incurable. The discharge in these instances, especially after much physical exertion, unusual sexual indulgence, or alcoholic excesses, becomes distinctly purulent, even years after the original infection. There are some men who, after any sexual intercourse, have discharge from the uretha, which passes away in a few days without any treatment.

It would appear to us that these facts indicate there are some mucous membranes which become so congested when stimulated, that they produce a muco-purulent discharge, under sources of irritation which are not gonorrheal in character, and this is what we find with other mucous surfaces. The conjunctiva in some instances becomes conjested, and pours out a complete secretion in a few hours, after being irritated by an external agent. The same rule applies to the nose, the pharnyx, and the bronchial tubes. If we apply the same line of thought to the skin, we shall find some cuticles so susceptible to external influences, that the east wind, the sun, soap, and in one instance I have met with, even daylight, produce an acute eczematous condition. Shall we doubt, then, that muco-purulent discharges, not distinguishable from gonorrhœa, do occur in instances where the irritation is not set up by specific pus cells? It has often occurred to my mind, that the many remedies advocated for curing clap, have had their reputation based upon the treatment of cases which have been non-specific discharges; discharges which would recover under any line of theraputics.

DIALYZED IRON.

Dr. Prosser James has lately said, in a summary of the position which dialyzed iron is entitled to hold in medicine, that the persalts of iron are frequently employed solely on account of their astringency, while the proto-salts are occasionally considered as being destitute of this quality. The freshly-prepared carbonate is an excellent mild chalybeate, but difficult to keep in an unaltered state, so that preference is given to reduced iron. The scale preparations of iron are held in repute, both from the extreme facility of their use, and their agreeable taste.

When these three forms of iron are inadmissible, dialyzed iron may be resorted to with admirable effect. It is a milder chalybeate than the three preceeding, and does not produce the slightest irritation.

A recent analysis by Professor Tichborne of Wyeth's prepartion agrees most exactly with Graham's statement, that dialyzed iron contains 98.5 parts of the oxide and 1.5 parts of hydrochloric acid. The liquid thus obtained differs altogether from an ordinary solution of salts of iron, by its not giving rise to the blood-red color on the addition of alkaline sulphocyanide, nor to the blue precipitate with ferrocyanide of potassium. It does not become cloudy on boiling, nor when agitated with two parts of ether and one part of alcohol is the ether layer colored yellow. It is so sensitive that ordinary spring water will cause a precipitate, yet no precipitate is produced by nitric, acetic, or muriatic acid. Graham's solution gelatanized in about twenty days, and he regarded it as a solution of colloid ferric hydrate which, he considered, existed in both a soluble and insoluble form. It is, however, never free from chorine. Theoretically, therefore, the liquid is a solution of a basic oxychloride, but it never can be imitated by dissolving saturated solutions of the hydrate. All these artificially-made liquors are astringent, with ferruginous taste and acid reaction.

Respecting the therapeutic value of dialyzed iron, of which there has lately been some inclination to doubt, Dr. James says there is no question. By the method now followed of counting blood-corpucles, it is found that the taking of dialyzed iron both increases their number and improves their condition. Dr. James gives, as an average dose, twenty to fifty drops, daily, in three doses. Dr. Weir Mitchell, of Philadelphia, gives as much as a drachm at a time.

Specimens have appeared in the market which are not only innocent of any acquaintance with a dialyizing membrane, but seem little else than diluted solution of perchloride of iron.—*Chemist and Druggist.*

MISCELLANEOUS ITEMS.

Dr. C. W. Null, Professor of Physiology in Louisville Medical College says he has used celerina in his practice, and finds it to be an excellent nerve tonic.

Dr. Shoemaker (*Medical Record*) applies traction by means of weight and pulley in sciatica. The extension is kept up until the limb is tired and the pain disappears.

Cysticerci and tæniæ coexisting in the same subject at the same time is an occurrence rarely noted. An instance was described by MM. Rathery and Sevestre. The existence of the tapeworm (tænia solium) was not suspected until it was found postmortem in the small intestines. Fifteen or sixteen cysts were found, all situated in different parts of the body.—*London Lancet.*

THE article by Dr. Pengra on the purification of water by freezing, published in THE PHYSICIAN AND SURGEON last spring, has attracted much attention both in this country and in Europe. The *London Lancet* refers to it in the high terms that it deserves. Now that the time for harvesting ice is again upon us, the attention of all gatherers of ice should be impressed with the fact that pure ice can be obtained only from pure water.

FASTING IN ACUTE RHEUMATISM.—Dr. Wood, professor of chemistry in the Medical Department of Bishop's College, Montreal, reports in the *Canada Medical Record* a number of cases in which acute articular rheumatism was cured by fasting, usually from four to eight days. In no case was it necessary to fast more than ten days. Less positive results were obtained in cases of chronic rheumatism. The patients were allowed to drink freely of cold water, or lemonade in moderate quantities, if they preferred. No medicines were given. Dr. Wood says that from the quick and almost invariably good results obtained by simple abstinence from food in more than forty cases in his own practice he is inclined to believe that rheumatism is, after all, only a phase of indigestion, to be cured by giving complete and continued rest to all the viscera.

THE NEW CODE.—The New York State Medical Society has voted to retain its new code. A resolution having for its effect a return to the old code, or that of the American Medical Association, was offered by Dr. Squibb, of Brooklyn, and was lost by a vote of ayes, ninety-nine; nays, one hundred and five. Undoubtedly the great support for the new code, went up from New York City and Brooklyn. The State Society has now cut loose wholly from the National Society and will not send delegates to that body Our opinion on this action has not changed since we first had occasion to express it in these pages one year ago. We believe entirely too much has been said by members of our profession against homœopaths. This school has been kept alive by the denunciations—called persecutions by the popular voice—heaped upon it by the medical profession. Homœopathy is not worthy of half the time and energy that has been given to it by the members of our profession. We believe that the "little pill school" is worthy of neither our anger nor our love.

THE TREATMENT OF SOME CHRONIC GASTRIC DISORDERS.—M. Broca, in a series of articles, strongly advocates, in ulcers of the stomach and chronic gastritis from various causes, the systematic washing-out of the stomach and artificial feeding. In washing out the stomach there are two indications to fulfil—one, to empty it of its contents, whatever they may be; and the other, to treat the diseased mucous membanes with medicated solutions. He advocates the use of the siphon tube, on the ground that its manipulation is so easy that in a very short time the patient can learn to wash his stomach out himself. The washing over, the patient should be fed before the tube is withdrawn, powdered meat, raw eggs, milk, or broth being the most suitable food. He lays great stress on the advantages of over-feeding the patient, and mentions 600 grammes of raw meat, a dozen eggs, and three litres of milk as a daily allowance that may easily be exceeded. It is always necessary to commence gradually, until it is ascertained that the patient can digest milk and eggs well. Should pain come on some hours after the meal, it is advisable to empty the stomach by means of the tube. The cure is permanent if the patients only take proper care of themselves afterwards. He thinks that this mode of treatment might with advantage be extended to other than purely gastric disorders; he suggests it, for instance, in advanced phthisis.—*Le Progrès Médical*, 39–42, 1882.

LISTERINE.—A. M. Owen, M. D., Professor of Surgery, Medical College of Evansville, Indiana, speaks highly of the use of Listerine: "I have become so thoroughly convinced of the true merit of Listerine that I can unhesitatingly confirm its claim as a perfect antiseptic.

"Since I ceased to use carbolic acid, several years ago, I have found no antiseptic or deodorizer in which I could place so much reliance as Listerine. Have employed it in dressing several after-amputations; one at hip-joint in child for disease of femur, one just below the joint in adult, cause the same; another, just below knee-joint, cause gangrene of foot; all made rapid recoveries, the first two cases being up and discharged well in four weeks. In a case of contracted fingers, following a burn in palm of hand, after dissecting out the integument and cicatrical tissue down to flexor tendons, extending to tips of fingers, I did not transplant any skin, but dressed with Listerine, one drachm; water, two ounces; had rapid filling in with healthy granulations, and the parts skinned over more quickly than ever before under my treatment. I have had the same good results in dressing old ulcers, and as an injection in leucorrhœa and gonorrhœa, and as a gargle in ordinary sore throat, varying the dilution according to indications. In wounds and operations generally Listerine four drachms, water one pint; or when to be kept constantly applied, Listerine one or two drachms, water one pint; in simple leucorrhœa, Listerine one ounce, hot water two pints, night and morning; gonorrhœa, Listerine one-half or one drachm, water one ounce.

"The happiest results from Listerine have been in washing out bladders chronically inflamed. Old cases of cystitis have yielded and improved more under Listerine one ounce, distilled water one pint, than anything I have used."—*Lancet and Clinic.*

THE
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ORIGINAL ARTICLES.

CASES FROM PRACTICE.

(I) PERITONITIS AND ENTERITIS; (II) DIPHTHERIA.

BY A. J. ROSENBERRY, M. D., Reshtigo, Wisconsin.

Case I.—Lena D., aged seven years. I was first called to see the patient on Friday evening, February 23, at about 6 o'clock. The patient was a blonde, rather delicate child, and had not been well enough to attend school for a week or ten days previously, though she presented no definite symptoms. About four hours previous to my visit she had bled some from the nose while lying upon a lounge. The immediate cause of alarm to the parents was a very copious emesis of a watery fluid, a portion of which had been saved for inspection and appeared to contain partially digested blood, evidently having been swallowed during the epistaxis. The patient appeared bright, answered questions readily, and, being interrogated repeatedly, denied the existence of pain in any part of the body although I made pressure over the bowels. Tongue, normal; but to my surprise, the pulse was 120 and temperature 104⅕°. Being unable to locate the disease, I attributed the rise in pulse and temperature to the nervous irritation produced by the nausea and vomiting and made the following prescriptions:

℞. Ol. ricini.. ℥ij.
Sig. ʒij at once.
Also,

℞.	Pot bromidi	ʒij ss.
	Spts. æth. nit.,	
	Spts. æth. co	āā ʒj.
	Spts. mindereri	ʒiv.
	Syr ipecac	ʒij.
	Syr glycyr 9 s	ad ℥ij.

M. S. ʒj. every three hours and left word I would call in the morning.

Called next morning at 9 o'clock and found patient had vomited repeatedly; but for two hours immediately preceding my visit she had been quiet. Continued the above mixture alternated with the following, provided the vomiting returned:

℞.	Elix bismuthi,	
	Aq. calcis	āā ℥i

M. Sig. One teaspoonful in milk every three hours.

The pulse was reduced to 100 and the temperature to 102°, the bowels had moved, and the patient seemed a considerable better, and she again denied repeatedly the existence of any pain. I directed the parents to call me if improvement did not take place by 4 P. M. At 7 P. M. I was again sent for and informed that since 3 P. M. she had been unconscious. Upon my arrival I learned that there had been no vomiting until 5 o'clock, about two ounces of the vomited matter were reserved for my inspection. It was a clear blue fluid, very similar to a solution of cupric sulphate. I immediately instituted inquiries as to the possibility of corrosive poison having been ingested, but failed to elicit anything. There was not and had not at any time been any pain. A few minutes later free vomiting occurred, of a bluish fluid, a portion of which was reserved for chemical analysis. The stomach was washed out with warm water until a clear fluid was returned. For an hour after this attack the patient seemed in collapse, the pulse being imperceptible at the wrist. Stimulants were given and the heart's action improved. Vomiting was continuous. The patient was unconscious most of the time; the face had a pinched expression; the pulse was extremely rapid and thready, and pressure over the epigastrium produced pain, in which condition she continued until eight or nine in the morning when her mind again became clear. She recognized friends. At 12 M. Dr. Phillips, of Menominee, Michigan, was called in consultation and concurred in the opinion that the case was acute gastritis probably produced by poison, the vomited matter at this time being bluish-green or green. Beef tea, milk and stimulants were administered per rectum at 3, 4 and 5 o'clock, P. M., and at 7 P. M. the milk so administered was present in the vomited matter.

A hypodermic injection of morphia was then given to quiet the general restlessness which had been great since 5 o'clock and the peristaltic action of the bowels. Stimulating and nutritive enemata were given but at 11 o'clock she began to sink and death occurred at 6 o'clock on Monday morning, thirty-six hours after vomiting first suspicious fluid.

Autopsy thirty hours after death showed three or four injected spots each as large as a silver dollar in the stomach; mucous membrane of stomach otherwise normal; very intense enteritis, especially of the duodenum and lower ileum, the mucous membrane being soft and diffluent, also general peritonitis; the liver, under surface of the diaphragm, spleen, and peritoneum adjacent being covered with a fibrinous exudate. There was at least apint of pus in the abdominal cavity. The lower ilium was also covered with the exudate.

This case is unique from the fact of the existence of enteritis and peritonitis without pain or tenderness of tympanites. The bowels moved naturally once or twice during the last thirty-six hours and only for the last eighteen or twenty hours was there any evidence of tenderness on pressure.

[The vomited matter sent was a thin watery fluid, slightly acid in reaction and colored green with bile-pigments. The blue color noticed was also undoubtedly due to bile-pigment, the different degrees of oxidation giving the different colors. Thorough tests were made for irritant poisons, but the results were negative. The case is certainly one of great interest for the reasons Dr. Rosenberry mentions. As is stated, the symptoms would certainly cause the physician to suspect some poison.—EDITOR OF THE PHYSICIAN AND SURGEON.]

Case II.—On Sunday, January 21, 1883, my boy, sixteen months old was attacked with diphtheria, which was endemic in a malignant form, quite a number of children having died. The first symptom was observed at noon, consisting of difficulty of swallowing and a disposition to sleep. At 4 P. M. treatment was begun. A spray consisting of an atomized solution of tincture iodine and carbolic acid was directed into the throat, a mixture containing tincture of chloride of iron and sulphate of quinine was administered for its tonic effect but the main reliance was placed on the free administration of brandy. I began giving it at first in doses of two teaspoonfuls every hour, diluted, the effect being carefully watched. After several doses had been taken and no narcotic effect being produced the dose was increased to three teaspoonfuls every hour and steadily held there for seventy-two hours. The first pint was taken in forty-two hours. Improvement was manifest after the first twenty-four hours and his ultimate recovery I am confident must be attributed to the astonishing quantity of brandy taken. That a child sixteen months old should consume a quart of brandy in ninety-six hours not only without injury but with steady improvement after the first few hours, shows the depression of the nervous system to be very great, and my belief is that when this fact is appreciated at its proper value and the treatment modified accordingly the ratio of deaths will be diminished.

A CASE OF SUDDEN FALLING OF HIGH TEMPERATURE AND RAPID PULSE TO THE NORMAL.

BY WILLIAM HAKE, M.D., Grand Rapids, Michigan.

I was called February 13, 1883, to see J. Mankowski, a Polish boy, aged seventeen years. He had been sick twelve days, and the family, having become dissatisfied, had determined to change physicians. Whether he would die or not from the present trouble was the first question asked me—a question which is by no means always pleasant to the young practitioner, and one whose answer sometimes troubles our older brothers.

I received the following brief history of the case from the family. A friend had one day forgotten the golden rule and struck M. on the parietal eminence on the left side of the head, with a piece of wood. The blow produced only a scalp wound, and there was but little hemorrhage. After the bleeding had been arrested by some simple means, M. resumed and finished his day's work without making any complaints of feeling ill. The next morning he made no complaints and began his work; but about noon he was compelled to desist on account of a severe pain in the head. This pain increased and the patient suffered intensely. In a day or two, the pain increasing, the face became swollen and dark blue in color. On the sixth or seventh day the face was so swollen that the patient could not see. During this the temperature was high (from 103° to 103½°) and the pulse rapid (from 115 to 120). On the ninth or tenth day the patient complained of pain in the back of the neck and of intense sensitiveness of the head and face. The attending physician made a diagnosis of erysipelas.

As before stated, I was called on the twelfth day, and at that time I found the following condition: The patient complained of intense pain and fullness in the head, with deafness on the side opposite the injury. There was inability to protrude the tongue beyond the teeth. Pain in the back of the neck and over the dorsal and lumbar vertebræ was intense. There was no pain over the last three or four cervical vertebræ. There was marked distress across the abdomen in the region of the umbilicus. The pupils were sensitive to light and were dilated. Vision was double, He had taken nothing but lemonade for the past three or four days. Urination and defecation were performed normally. (I might say that some time before I saw him, there had been diarrhœa and tympanitis, for which the attending physician had given opium and used external applications of turpentine. Tincture of iron and sweet spirits of nitre had also been given).

From the condition in which I found the patient, I thought that there had probably been concussion and effusion in the cranial cavity below the seat of injury. I prescribed six grains of potassium bromide and seven of mercury, with chalk, to be taken every three or four hours. The next morning I found my patient worse, with all the above mentioned symptoms exaggerated, and with the addition of the sensation of "pins and needles" in the limbs and with cramps of the legs every half hour. Pulse, 120; temperature, 105°. I increased the dose and continued the use of the potassium bromide. Patient had decided that death was near and asked to be allowed to see his spiritual adviser. After this, for a while, he would take neither medicine nor food. At 5:30 P. M. I found his condition still more alarming. Pulse, 130; temperature, 106. I prescribed the following:

℞.	Potassii bromidi..............................	ʒij.
	Saponiæ..	gr. xij.
	Ext. veratri viridis..........................	gtts. xx.
	Aquæ distillatæ................................	f ℥j.
	Syrupi tolutani.................................	q. s. ad. f ℥ij.

M. S. A teaspoonful every three hours.

I stated that if the patient should feel easier after the second dose, the medicine should not be given so frequently. I also ordered a mustard plaster to be applied to the back of the neck and along the spine. Next morning, much to my surprise, I found the patient wholly free from pain and declaring that he was well. His pulse and temperature were normal and so remained. His mother stated that soon after the second dose, the patient became easy. I continued the above mentioned prescription for two days, giving three doses per day. After that I ordered the following:

℞.	Potassi iodidi...................................	ʒiij ss.
	Extracti ergotæ fluidi.......................	f ʒiij ss.
	Aquæ destillatæ................................	f ℥j.
	Syrupi tolutani.................................	f ℥iij.

M. S. A teaspoonful after each meal.

The patient, although weak for some time, had no relapse, and is now well. The peculiarity of this case is the sudden falling of the pulse and temperature. Was this due to the medicine?

NOTICE IN REGARD TO SUBSCRIPTION.

A few of our subscribers have not yet remitted their subscription for the present year. Our subscription price is two dollars per year, PAYABLE IN ADVANCE. It requires money to publish a medical journal, and we sincerely hope that all delinquent subscribers will sufficiently appreciate this fact to prompt them to remit the amount of their arrearage at an early date. The amount is very small in each case, but the aggregate would greatly assist in making a first-class journal.

TRANSLATIONS.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.
BY RALPH D'ARY M. D., ROMEO, MICHIGAN.

A CASE OF TREPHINATION.

A paper read at the Volhynia Medical Society.
BY G. BRUNS.

ABBREVIATED.

On the 18th of July a boy was brought into the Jitomir Hospital in an unconscious condition. The boy was an orphan, and the strangers who brought him to the hospital could give but little information about his case. They stated that he was fourteen years old and that *two weeks* previously he had had his head injured by some machinery in a brick factory. I found the patient to be of medium build, poorly nourished, very anæmic, and in a condition of semi-unconsciousness, from which, however, it was possible to rouse him. Then he answered questions, but very unwillingly and slowly, drawling, and stopping as if in deep thought. The answers were mostly in monosyllables, and it was impossible to ascertain anything concerning his accident. In the middle of the left parietal bone was a longitudinal wound about one and one-half centimetres in length, penetrating the skin, and covered with normal granulations. On the right temple, above the ear, there was also a superficial skin wound (abrasion?). Under it could be felt a depression in the upper part of the squnamous portion of the temporal bone. The upper margin of the depression (approximately along the temporal suture) could be distinctly felt through the external covering, the lower margin was indistinct. The depth of the depression was about one and one-halt centimetres. The patient remained impassive and exhibited so signs of pain whilst his head was being examined, and digital pressure made in various places. He was unable to open his eyes; both pupils were dilated, but especially the right one; neither pupil reacted to the light. There was strong divergent squint. The patient could move the eyes in an outward direction only. The degree of sight could not be ascertained. The branches of the trifacial, the facial and auditory nerves acted normally. The temperature was normal, the pulse 60. Although able to swallow, the patient did not ask for food. Occasionally he passed urine and fæces without knowing it, at other times he made known his calls. He could not stand.

With a view to diagnosis it was necessary to determine two points. (1) The cause of the general depression of mental functions; (2) the cause of the paralysis of the nerves involved. The depression in the temporal bone was sufficient to account for the depression of the mental functions. Possibly there may also have been hemorrhage into the cranium, and if so, that would account for the paralysis of the motor oculi nerves. There was no evidence of a fracture of the base of the cranium, since the right facial and auditory nerves and the branches of the tri-facial were uninjured. Having arrived at this approximate diagnosis, the next thing to determine was: What should be done? We had fracture of the skull, but it was subcutaneous. The general condition of the patient and the considerable depression in the temple indicated the necessity of elevating the depressed portion of bone. But against the operation spoke, firstly, the unavoidable necessity of converting a subcutaneous or simple fracture into an open or compound one, and secondly, the circumstance that sometimes the cerebral functions gradually return to their normal condition without operation, even in very considerable depressions of the cranium. Unfortunately, in this case, we did not know whether the patient's condition was getting better or worse. The second day after admission the patient was found to be in the same condition. Since he was greatly emaciated from want of nourishment, and because the depression in the skull was so great, we resolved to operate. This was done on the twentieth of July. We made an incision two inches in length along the upper border of the depression, down to the bone. Another incision was made across the first one, in a vertical direction. The four flaps thus obtained were turned back, and we found that the soft tissues at the bottom of the wound had been bruised to a pulp. The fracture was really on the parietal bone, one-half centimetre above the temporal suture. The upper border of the fracture was very abrupt. In the depression lay a narrow strip of the parietal and the squamous portion of the temporal bone. The depth of the depression was about one and three-fourths centimeters. I applied the trephine in such a manner that three-quarters of its circumference were on the parietal bone. Having removed this disk, I applied the elevator under the depressed portion, but although I made considerable effort, I could not elevate it. In order to ascertain the cause of the difficulty I prolonged the horizontal incision forward as far as the great wing of the sphenoid, and found that the anterior border of the squamous portion had lodged beneath the edge of the great wing, which, therefore, prevented its replacement. The overlapping edge was removed with the bone forceps, and the depressed bone was then readily elevated. The operation had been performed without carbolic spray, but I now washed the wound with a four per cent. solution of carbolic acid and closed it. The side of the head had been repeatedly well washed with a three per cent. solution before and during the operation. About one dram of iodoform was placed on the wound and a compress of absorbent cotton was applied. An ice-bag was applied to the head. I had given no chloroform, but the patient made hardly any signs of pain.

During the first two days after the operation, there was absolutely no change in the condition of the patient, but on the third he became restless, and in the morning had torn off the bandage. In the evening the temperature rose to 39.3°, but the next day it fell again to 38°; the pulse rose to 80. From this day consciousness began to gradually return, also the appetite. The temperature till recovery did not rise above 37.5°. He slept most of the time but was easily roused, and then invariably asked for food. The wound granulated well. The iodoform dressing was renewed every two or three days. On the first of August there were signs of excitement, the patient manifested fear of everything, and talked of snakes. This condition continued two days, then somnolency again set in. Suspecting that the iodoform had something to do with the nervous symptoms, I removed it, but there was no prompt improvement. However he gradually became more rational, kept awake and began to manifest an insatiable appetite. Occasionally he still showed signs of irritation, and had spells of crying. The lids and eyes remained without improvement, and I discovered strong diplopia, but on account of the boy's confused answers, could not ascertain its precise nature. The sight of the right eye was weaker than that of the left. When trying to stand up he swayed to and fro, and maintained his equilibrium with difficulty. In September he could walk and talk freely, but appeared to be somewhat idiotic. About this time a townsman of the boy's happened to enter the hospital and told me that he always had been weak-minded. The patient's eyes still did not improve, and he could only see by wrinkling his forehead and throwing his head far back.

October 8 he was chloroformed and an operation to correct the ptosis was performed. The diplopia did not improve, and the sight of the right eye, which he kept closed, in order to avoid the double image, was still growing weaker. Soon after this operation the patient became so irritable and quarrelsome that he had to be separated from the other patients. At present he is physically well, rather less irritable, and answers rationally when spoken to. There is no improvement in his eyes.

In conclusion I ask: "Was it right to have trephined the patient or would it have been better to have left him to nature?" It is true, the result of the operation was comparatively favorable—the healing of the wound was aseptic, the patient recovered, and his former mental abilities are partly restored (or perhaps wholly so) but still I have the impression that in this case the operation has been of little use, if any. The improvement in the mental functions was so gradual that it is impossible to ascribe it to the restoration of the intracranial capacity (space) by elevation of the depressed bone. I had expected a more pronounced and prompter change. Having seen cases of depressions in the cranium recover equally well without trephining, and considering the comparative freedom from danger in subcutaneous fractures of the skull, I shall in future abstain from trephining, unless the symptoms are more urgent.—*Vratsh*

RESECTION OF INTESTINE.

BY PROFESSOR TAUBER, in *Vratch.*

TRANSLATED IN ABSTRACT.

Resection of the intestine is gradually obtaining a standing in surgery. Hitherto eighty-nine cases have been published. They took place under the following circumstances: Gangrene of irreducible hernia, forty-five operations, with twenty-three deaths; preternatural anus and fecal fistula, twenty-two operations, with eight deaths; excision of malignant tumors of intestines, nine operations with five deaths; wounds of intestine seven, adhesions and inpermeable strictures, six. In these last thirteen cases there were seven deaths. The above figures show the best result in preternatural anus, since two-thirds of the cases recovered. Recovery might also have taken place in the following case operated upon by Professor Tauber, had it not been complicated with especially unfavorable circumstances.

The patient was forty-eight years old, when in consequence of a right scrotal hernia that could not be reduced, he was subjected to herniotomy. During that operation the intestine was sounded and the surgeon had thought it best to apply a ligature (to the distal end) and to form an artificial anus. Peritonitis and great debility followed. Five months later Professor T. found that he had in the iliac region a tumor in which it was possible to distinguish the central and peripheral end of the severed intestine. Through the orifice of the intumescence protruded the ulcerated mucous membrane. The tumor consisted of a coil of intestine and was covered with mucus and fœces; the mucous epithelium had ulcerated in some places, while in others it resembled the skin in firmness. From the orifice of the central end, in which peristaltic action could be noticed, there dropped scybala and mucus. The finger when introduced into the distal end, met with a closed sac, which was supposed to be caused by an acute bend in the intestine, which, indeed, could be felt to exist. The opposite walls of both ends had grown together. The patient was excessively emaciated, suffered with pains in the hypogastrium, the temperature was increased. Efforts were made to reduce the prolapsed coil of intestine and to keep it within the abdomen by means of bandages and pads, but without success. It was impossible to positively ascertain whether the distal part of the intestine was pervious, since water, injected into the rectum, immediately returned. The patient's allowance of food was reduced to a minimum and thereby his fever was checked. Then the operation was undertaken.

By a vertical incision in the scrotum, access was obtained to the descending portion of the prolapsed coil of intestine. There were many adhesions between the latter and the hernial sac, which had to be divided. After this the upper part of the intestine could be drawn out of the abdominal cavity as far as the mesentery would allow. The isolation of the ascending part was less difficult. Having separated the hernial part and gained access to the mesentery, the author applied to the latter four pairs of ligatures *en masse*, and separated it for a distance of about four to five cemtimeters without hemorrhage. Then he encised, with the enterotome, thirty-two centimetres' length of the intestinal canal. He applied two rows of sutures:—One of eighteen separate stitches to the mucous membrane; and another after Lambert's method, of twenty stitches to the serous covering; finally another straight row of stiches along the cut edge of the mesentery. The latter were of carbolated silk, the former of cat-gut, number one. Then the author replaced the stitched-up bowel into the abdomen, through the hernial orifice; removed the hernial sac, sowed its neck into the abdominal ring, applied drainage to the scrotum and a Lister bandage over all.

During the first two days there was only an acceleration of the pulse. Towards the evening of the second day the patient felt a call to stool; a clyster was given, but without results; the liquid did not enter the bowel, but ran out. On the third day there was severe bilious vomiting; the abdomen enlarged, the breathing became quick and superficial. There was constant tenesmus, but the clysters remained useless, as the intestine was evidently inpervious. The vomiting did not cease until death set in.

Autopsy: The union between the stitched parts was perfect; the seam was in the lower part of the ilium, four fingers' breath above the valvala Bawhini (ileo-cæcal). All the intestines adhere by false membranes to the abdominal walls. The intestine above the seam is distended with gas. The lumen of the transverse and descending colon is narrowed, and the sigmoid flexure does not even admit the finger. In the right iliac fossa there is a little pus. The whole cæcum and ascending colon is obstructed with scybala. There are signs of marasmus.

The autopsy shows that the patient had suffered with chronic peritonitis, and that the acute peritonitis, which was the immediate cause of his death, was due to the circumstance that the peristaltic movement which began after the continuity of the bowel became re-established, was unable to force the old scybala through the atrophied lower segment of the large intestine. The author thinks that if resection of the intestine had been performed immediately after the hermiotomy the chances of success would have been much greater. The extreme abstinence from food during six months; the repeated exacerbations of the chronic peritonitis; the frequent onsets of fever; the retention of the scybala—all these circumstances combined very materially must have determined the fatal issue.

In conclusion the author summarizes his considerations on the above case as follows:

(1) In anus preternaturalis from constricted hernia a valve may form in the lower segment of the bowel, completely closing its lumen. (The cul-de-sac spoken of above was caused by such a valve).

(2) The fæces may remain a long time in the large intestine (in the above case one hundred and sixty-five days) without causing irritation, as foreign bodies would do.*

(3) The application of tied sutures in separate rows through the mucous membrane and the serous coat of the intestine completely prevents the penetration of the contents of the intestines into the peritoneal cavity.

(4) Resection of the bowel, and not the formation of an artificial anus, should be regarded as the ultimum refugium of herniotomy.—*Med. Obozr.*

ON PES CALCANEUS.

Nicoladoni divides pes calcaneus into two groups, basing the division on clinical observations and pathological anatomical facts. In the first group the deformity depends on excessive dorsal flexion. In this group are embraced the following varieties of pes calcaneus: (1) congenital; (2) acquired and caused by paralysis; (3) acquired in consequence of pathological changes in the tibio-tarsal articulation and contiguous parts. To the second group belongs the pes calcaneus caused by too low a position of the heel—the pes calcaneus proper. This is an acquired form.

In the congenital variety the tarsus is in a condition of strong dorsal flexion; all the muscles of the leg and tarsus are healthy and the movements of the foot are free; there are no changes in the region of the metatarsus and phalanges; further dorsal flexion is impossible; when an effort is made to extend the foot, the tendons on the dorsum are visibly tightened and prevents the extension. This form owes its existence to the circumstance that during utero-gestation the foot has for a long time been kept in the dorsal flexion. Treatment is simple. When the defect is not very pronounced, it disappears of itself when the child begins to stand and walk. When more pronounced, simple bandaging to a splint will correct it. This proves that the cause of the anomoly lies simply in the insufficient development (in length) of the dorsal flexors.

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*[Was not the chronic peritonitis due in part at least to the presence of the fæces?—D'Aby.]

The acquired form, developing in infantile paralysis, in the course of time also corrects itself by means of the weight of the body.

Acquired pes calcaneus may arise from large cicatrices on the dorsum, or from affections of the tibio-tarsal articulation or neighboring parts, with displacement of the epiphyses and formation of anchylosis.

The second group of pes calcaneus is developed in adults and is characterized by a low position of the heel, the foot not being flexed on the leg, and the toes not looking in an upward direction. The dorsum forms with the leg an angle slightly greater than 90° and the sole looks downward. The patient walks well on the heel and the prominences at the base of the first and fifth toes, while the sole is bent into the shape of an arch and does not touch the floor. In this form the heel represents the stump after Pirogof's operation. If there is any paralysis at all, it affects only the muscles of the calf.—*Med. Obozr.*

OBESITY PHYSIOLOGICALLY TREATED.

A PAMPHLET BY PROFESSOR W. EBSTEEN.

According to the author's own statement, his article is only an *attempt* to regulate the diet of the obese in conformity with the same dietetic laws that the physiology of our day recognizes as rational and suitable for *everybody*, whether obese or not, and to set aside those methods of treating obesity which are based on the withholding of fatty food materials (after the Harvey–Banting method).

The prognosis in obesity, as is well known, is rather unfavorable in general, but is still more so the quicker the accumulation of fat takes place, the younger the patient is; the sooner the complication of anemia develops itself, and the more the internal organs (especially the heart) are affected, and the smaller the probability of removing the chief etiological momentum, and of changing unfavorable habits of life of the patient's. The author recognizes the usual *causes* of obesity, that is, high living in general, abundant alimentation with certain special food articles, immoderate use of spirituous liquors, insufficient bodily and mental exercise; *insufficient exposure to the sunlight, anemia*, suppression or cessation of the sexual functions, constitutional predisposition, and heredity. But the most active of all these causes, according to the author's experience, is excess in eating and drinking. All the other causes above cited are only predisposing ones, and without excess in living in general, and in the use of some special article of diet in particular, obesity could never develop itself. Obesity in man is fully analagous to the condition developed in animals by the fattening process. With regard to the nature of those articles of diet which especially tend to produce obesity, the author's views are essentially different from those generally accepted. According to general belief abnormal deposition of fat in the economy is due especially to foods rich in fat and carbon, whilst highly albuminous food is considered harmless. At least the favorite methods of the treatment of obesity seem to be based on these assumptions. Thus Chambers, Harvey, Banting, Cantani, Zimmermann and others insist on the avoidance of all fatty or carbonaceous foods, whilst they allow albuminous foods. In reality, however, this view is irrational and contradictory to the latest results of scientific research. For instance: Although Voit states that in carnivorous animals, (which with the exception of fat, live almost exclusively on nitrogenous food,) the development of fat is but insignificant, yet on the other side Hennenberg shows that from one hundred parts of albumen may be elabonated fifty-one to fifty-two parts of fat. As to the fat forming properties of carbonaceous foods, Voit himself acknowledges that this result is not a direct one—"no fat is elaborated from the carbonaceous materials themselves," but their presence favors the elaboration of fat from the albuminous materials, (proteids), "for the carbonaceous materials, owing to their abundance of oxygen, very speedily separate into carbonic acid and water, and thereby prevent the complete destruction of a certain part of disintegrating albumen, which is then retained in the system as fat." This influence of the carbonaceous materials takes place more especially when they are used in moderate quantity, while the proteids are ingested in large quantities. The fats themselves act in a similar manner, but less energetically than the carbonaceous (proximate) elements, since the fats do not separate into carbonic acid and water as readily as the carbonaceous elements do. Therefore the worst combination of food, that is, the most favorable one to the production of obesity, according to the author, is one consisting of a moderate quantity of carbonaceous elements with large quantities of proteids. The use of carbonaceous food in itself, therefore has but a slight influence in the production of obesity, and the fats themselves—which generally are so strictly prohibited—have still less to do with it.

Accepting this etiology of the disease, the author's proposed method of treatment is obvious. If quantitative and qualitative excess of food is the main cause of the disease, the withdrawal of the excess must be the main care of physician and patient, and the regulation of all the other conditions and circumstances of the patient's life, though by no means to be neglected, is after all, only of secondary importance. But whatever dietetic regimen may be laid down for the patient's guidance, it must be of such a nature that the patient may be enabled to follow it as long as possible without interruptions and without injury to his general health. If the nature of the regimen selected be such as to necessitate occassional suspensions of it, the patient during the interval will naturally return to his old habits and consequently become as fat or fatter than before. For this reason the starvation regimen is utterly useless for the cure of obesity. Another ground for condemning the starvation regimen is that during its observance the patient loses not only his fats but also the proteids of his body. As to the other methods, above named, which are founded on the prohibition of fatty foods, and the exclusive use of proteids—we have shown their fallacy. Besides that, they are intolerable to the patient, since they restrict him to too monotonous a diet. The principles laid down by the author for the treatment of obesity are as follows:

(1) The patient should not be overfed, so as to lose his appetite, but neither should he be starved.

(2) In spite of the desired gradual decline in the weight and bulk of his body, through the diminution of fat, the patient's strength should not only not decline, but actually increase.

Truly a difficult task to accomplish! But the author solves it in a very simple manner, by allowing the patient to use the fats as well as the proteids for his food. The use of the fats for the reasons above stated, he thinks not only admissible, but actually indispensable. He reasons thus: The fats limit the disintegration of the proteids, consequently they limit the quantity of albuminous food required by the patient, and this cir cumstance sensibly helps the patient to observe his dietetic regimen, which at best imposes on him certain denials and restrictions. These latter concern the carbonaceous foods—for the author absolutely forbids the use of sugar, every kind of sweets and potatoes, and limits the daily quantity of bread to eighty to one hundred grammes. He allows the use of asparagus, spinach, cabbage, and all kinds of meat, even fat meat. But he limits the daily quantity of fat food to sixty to one hundred grammes, and of meat to one-half or three fifths of the quantity prescribed by the Harvey–Banting method. (The latter prescribes three hundred and sixty to four hundred and fifty grammes). The patient is very *gradually* introduced to his new regimen, and is allowed to continue three meals a day. Light wine at dinner is not prohibited, but is absolutely prescribed.

The author states that he has used the above treatment with great success, in every possible form of obesity, even in the anemic, gouty, dyspeptic, diabetic, and sufferers from heart disease. In the dyspeptic cases he even observed a cure of the dyspepsia. All his patients preserved a good appetite, and felt well, and did not murmur about their privations.

The author rejects the treatment of obesity by pharmacal means alone (liquor potassæ, diuretics, cathartics, extracts, fuci vesiculosi, vinegar, etc.), as well as by mineral waters. The former he states is useless, and the latter even hurtful, and the more so, the more powerful the deobstruent effect of the waters is. Neither does he believe in the efficiency of an increase of physical exercise without the proper regulation of the diet.—Abridged from an abstract in *Med Obozr.*

COMPOUND DISLOCATION OF METATARSUS.

BY C. SCHEER.

ABBREVIATED.

Dislocations of the metatarsal bones happen very rarely. Malgaigni and Hitzig could collect only twenty-nine cases. According to them this dislocation often remains unrecognized. Dislocation of the toes, together with their metatarsal bones happens still more rrely. König and others describe these dislocations chiefly as displacements of the metatarsal bone or first phalanx to the dorsum or sole of the foot. Weinlechner has pointed out why reduction is frequently impossible, namely, incarceration of the capsule formed by the ligaments around the joint, incarceration of the head of the bone in the slit of the ruptured capsule, and entrance of tendons between the joint surfaces. The following case deserves attention because it differed from the usual descriptions, and because the wound complicating it permitted a distinct examination of the dislocated bones, and showed the cause that prevented me from reducing the dislocation.

Dr. Weinzweig and I were called to a young Hebrew. The evening before he had been riding on horseback over the ice. The horse fell on its right side and had injured the rider's right foot. Over the first metatarso-phalangeal joint, on the inner aspect of the foot, there was a linear wound with slightly everted edges, in length less than inch. From the wound protruded the head of the first metatarsal bone, which had turned round its longitudinal axis, so that its dorsal aspect now looked inward and formed an angle of 45° with the edge of the instep. The base of the bone could be felt to be slightly raised and its lower tuberosity to project over the base of the second metatarsal bone. On the other side it was firmly united to the cuneiform bone. The big toe had a perfectly normal direction, but it was slightly shortened, the base of the first phalanx lying between the head of the first and second metatarsal bones. The mechanical agency having caused this dislocation I conceive to be approximately as follows: When the horse fell on the foot the toes were violently pressed against the ice in a position of extreme extension. This would dislocate the big toe. Then the horse, with the shoe of one of its fore-feet struck the inner upper border of the metatarsus, as the torn boot plainly showed. This and the continued pressure on the violently extended toe, would produce such injuries as above described.

When trying to reduce the metatarsal bone I encountered great difficulty in trying to revolve it around its longitudinal axis in order to bring it into its normal position. I felt that the obstacle was at its base. The tuberosity on the lower aspect of the base of the metatarsel bone would catch on the base of the second metatarsal bone and lift the first one, and being caught in the ligaments was held so strongly that the bone would neither be turned round nor pressed inward into its place, although I used considerable pressure. Under the circumstances I followed the directions of Lücke, that is, I resected the protruding head of the bone and closed the wound. I believe that even if there had been no wound, the dislocation would have taken exactly the same shape, but diagnosis, for want of known symptoms, would have been difficult. I am now, however, enabled to describe them: Normal direction of great toe with slight shortening and abnormal mobility; projection of the head of the metatarsal bone inward, and considerable projection (like a tumor) on the base of the second metatarsal bone.—*Vratsh.*

OPERATION FOR OZÆNA FETIDA SIMPLEX.

In order to cure the above disease Professor Volkmann removed in two young girls the lower turbinated bones and the greater part of the middle ones, and with good results: The fetor disappeared after the operation, athough it had previously resisted all disinfectants. Like all such patients, both girls had very narrow noses, so that only very thin instruments could be introduced. The noses were asymmetrical, the vomer bent, and on one side the turbinated bones almost entirely filled the nasal cavity. In one patient the mucous membrane was strongly congested and swollen, and the discharge very abundant; the other had cicatricial contractions and horny crusts. The fetor disappeared after the operation, according to Professor Volkmann's opinion, because the nose was better ventilated and the disinfectants could be applied directly.

The operation is performed in the following manner. A large, and suitably bent and groved chisel is introduced into the nasal cavity, and being held in the direction of the middle meatus, two or three smart blows are struck upon it. The concavity of the chisel at first must curve inward and then downward. After cutting off the turbinated bones, the bands of soft tissue by which they remain hanging are cut through with scissors and the bones are then withdrawn without difficulty. If bleeding is severe, the tampon must be used.—*Med. Obozr.*

MAGIC PILLS.

The *Gazette des Hôpitaux* narrates the case of a hysterical patient who had long lain in spasms and suffered frightful pains. Morphine could no more be given as she began to show toxic symptoms. Then Dr. Landouzy gave her some pills, calling them "Fuloninant Pills," and cautioning her as to their extremely dangerous nature. She took four times the dose prescribed in order to escape her suffering by suicide. She then professed to feel great burning in the stomach, jumped out of bed, began to walk the floor and—got well. The wonderful pills consisted of mica panis albi.—*Medical Vestnix.*

PERMANENT TRACHEAL TAMPONADE.

Dr. Michael has made numerous experiments with a view to preventing the entrance of fluids into the trachea in cases of largyneal paralysis following on operations and invented permanent tamponade of the trachea. In one case after thyroidotomy for cancer he completely closed the trachea for five months. This was done by means a canula covered with a thick drainage tube. He recommends this method in all cases. Where tracheotomy only has been performed and where there is therefore only a small wound of the trachea not admitting of the passage of a thick tube he uses a tampon which, small at first, would expand after introduction. This he makes from a piece of pressed sponge of proper size and shape inclosed in fine rubber tissue. After introducing the rubber bag with the sponge, he injects water into it by means of a syringe and thus causes the sponge to swell and fill the trachea. In some cases he uses a little rubber bag full of water or glycerine. Air-filled bags are not suitable, because they soon diminish in size. He recommends this method also for preventing pneumonia caused by the irritation of foreign bodies getting into the air passages in cases of paralysis of the muscles of deglutition, or traumatic communications between the larynx and the œsophagus.

CAIRINE.

We have already noticed (in the January number of THE PHYSICIAN AND SURGEON, the new pyretic named as above. Since then Professor Filchne has thoroughly tested it and is very favorably impressed with it. It has neither a cumulative nor other hurtful collateral effect. One patient, with chronic peritonitis, has been reducing her evening temperature nightly, for five weeks, by taking cäirine and seems to do and feel well. But when beginning to use the remedy, in order to determine the magnitude of the dose, it is necessary, at least during the first few days, to accurately take the temperature every hour, or at least every two hours. To force the temperature lower than 37.8–38° the Professor thinks improper. For an adult of medium weight and constitution the average dose, in acute disease, would be about fifteen grains every hour. But when the patient is much reduced in weight and strength the dose may have to be much less, say one-sixteenth—one eighth—one-fourth gramme, (one, two, four grains.) In such cases even one-eighth gramme may lower the temperature to 36° or even 34.8°. Sometimes it is well to begin with larger doses, lessening it every hour. If the fever does not last the whole day, the last dose is given an hour or two before the usual subsidence of the fever, in order to avoid chilling the patient. The chloride of cäirine is a perfectly white, beautifully crystalized substance, easily soluble in water.—*Vratsh.*

PERCUSSION OF THE SPLEEN.

All the authors direct to place the patient in the diagonal position (that is, the dorsolateral) in order to percuss the spleen. This position, however, has been found by Professor Maragliano (*Italia Medica*, 1882, Supplemento) to be altogether wrong, for it gives inaccurate results, especially concerning the anterior limit of the spleen, and may lead to diagnosis of tumor or enlargement of the spleen where there is none. Professor M. states that he has made numerous observations and has found that the spleen is much more moveable than is generally believed. Thus if the patient lies on his back the anterior margin of the spleen (or of its area of dullness) does not advance beyond the posterior axillary line. In the sitting position the anterior boundary of dullness in the same, whilst the posterior boundary coincides with the spinal column. If now we place the same subject on the right side, we find that the anterior boundary has advanced as far as the middle or even the anterior axillary line, and that the posterior boundary, which was along the spine, is now in the linea scapuluris. We also find a considerable area of *clear* resonance, where there was *dullness* in the other position of the patient.

Therefore the only correct position for the patient, for percussion of the spleen, is the *dorsal* one. It is the only one which gives correct results. In this position the *normal* spleen is bounded anteriorly by the posterior axillary line.*—*Med. Obozr.*

[*In order to percuss the spleen in this position, the patient should lie flat on his back on a table, the left side of his body projecting as much as possible beyond the edge of the table.—D'Ary.]

BOOK REVIEWS.

THE SYSTEMATIC TREATMENT OF NERVE PROSTRATION AND HYSTERIA. By W. S. Playfair, M. D., F. R. C. P., Professor of Obstetric Medicine in King's College; etc., etc. Cloth; pages, 111. Philadelphia: Henry C. Lea's Son & Co., 1883. For sale by Sheehan & Co., Ann Arbor.

Dr. Playfair gives a very interesting account of his success with the treatment of hysteria by the method of Dr. Weir Mitchell, of Philadelphia. We have once before called the attention of our readers to this method. It consists in seclusion of the patient from all ill-timed, sympathizing friends, in rest, the use of massage and proper dieting. Under this method many most marvelous cures have been wrought. But as the method is worthy of more explanation, we quote from Dr. Playfair as follows:

(1) "*Seclusion and Rest.*—An important element in the treatment—and one which, from what I have seen of these cases, I believe to be absolutely indispensable—is the entire seclusion of the patient under a competent nurse, and her removal from the morbid atmosphere of invalid habits, which has gradually grown up around her. Unless the patient is entirely removed from the injudicious sympathy and constant tending of her friends, it will be next to impossible to gain that moral influence over her which is really essential to success. This is a point which involves so severe a strain that it may be found very difficult to obtain the consent of the patient and her friends to a measure which will seem to them so harsh and strange. I do not think, however, that any compromise on this point should be admitted; and if it be found impossible, from domestic reasons, to secure the removal of the patient from her house, it should, at least, be made an absolute *sine quâ non* that she should be placed in a separate room with her nurse, and that she should not be visited by any one except her medical attendant. On this point Dr. Mitchell's experience is worthy of note. 'I have often,' he says 'made the effort to treat these cases in their own homes, and to isolate them there, but I have rarely done so without promising that I would not again complicate my treatment by such embarrassments. Once separate the patient from the moral and physical surroundings, which have become part of her life of sickness, and you will have made a change which will be, of itself, beneficial, and will enormously aid in the treatment which is to follow.' The first step, on commencing, is to place the patient at rest in bed. It will be readily understood that this absolute repose is only intended as a temporary resource, until, by the means presently to be described, the nutrition is improved, and new tissues are built up. Space will not permit of my following Dr. Mitchell

in his explanation of the manner in which this proves serviceable; but independently of the physical benefit in patients apt to suffer from exhaustion on the slightest fatigue, there is a distinct moral gain. 'From a life of irregular hours, and probably endless drugging, from hurtful sympathy and over-zealous care, the patient passes to an atmosphere of quiet, to order and control, to the system and care of a thorough nurse, to an absence of drugs, and to simple diet.' As a rule, in bad cases this repose in bed is continued during the greater part of the treatment, averaging from six to eight weeks; and at first the rest is made absolute, the patient being only allowed to rise for the purpose of passing her evacuations, and is neither allowed to read, to sew, nor to feed herself. Practically there is so much to do with feeding, massage, and electricity, that this is not found so wearisome as might be supposed; but no doubt, the monotony of the life, and the growing strength which accompanies a satisfactory progress towards cure, tend to make the patient the more willing to throw off her old habits of invalidism when the proper time arrives to make the effort. By degrees the period of repose is lessened, and the patient is gradually made to sit up for several hours, until towards the end of the cure she only rests on the bed for three or four hours daily.

(2) "*Massage.*—This, combined with faradization, is a very important part of the treatment, and it consists in systematic shampooing and exercise of all the muscles, both of the extremeties and trunk, first for half an hour or so twice daily, but very soon for not less than an hour and a half night and morning. By this means the cutaneous circulation is improved, and the muscles are brought into active exercise without the expenditure of nerve force. To do this effectually considerable experience is required, and although in one or two cases I have had it done successfully by the nurse, it requires so much intelligence on her part, and she is besides otherwise so fully occupied by the rest of her work, that I think it preferable to employ a regular rubber. Full details of the method to be adopted, and the best way of exercising the various groups of muscles and the joints, will be found in Dr. Mitchell's book. It is surprising how soon the patient comes positively to enjoy a manipulation that for the first few days is very trying. Soon all local tenderness disappears, and a pleasant sense of exhaustion, followed by refreshing sleep, is alone experienced. In two of my cases the abdomen, especially in the ovarian regions, was so tender that the patient at first shrank from the slightest touch, but in a very short time she could be freely handled and kneaded in every part.

(3) "*Electricity.*—This forms a valuable subsidiary means of exercising the muscles. The interrupted current is employed twice daily from half to three-quarters of an hour. Here, again,

some practical skill is necessary, but with a little careful teaching on the part of the practitioner, the use of the battery can be safely and efficiently entrusted the nurse. The poles, armed with wetted sponges, are placed on the muscles to be operated on in turn, about four inches apart, and slowly moved until the muscle is fully and freely contracted. Commencing with the feet, the whole body, except the head, is thus systematically gone over. There is no doubt that this is painful and disagreeable, but is of unquestionable utility, especially in cases such as the one to be presently narrated, in which there was long-standing hysterical paralysis, and consequent atrophy from disuse of extensive groups of muscles.

(4) "*Diet and Regimen.*—These form the most important and most characteristic part of the cure. It is perfectly astonishing how, under the conditions above described, a pale, anæmic, and wasted invalid, able to eat next to no food, can be brought to consume, and not only to consume but perfectly to assimilate, an amount of nourishment that would appear to be incredible had experience not amply proved the fact, so that she shall gain flesh, weight, and strength ro rapidly that the change is almost apparent to the eye from day to day. The first step, after secluding the patient with the nurse, and before the massage is commenced, is to place her on a diet of milk alone, given at intervals of three hours. At first three to four ounces are given at each feeding, but in a couple of days or so the amount is increased to eight or ten ounces, so that within three or four days she is consuming two or three quarts of milk within the twenty-four hours. No difficulty is experienced in getting the patient to take this quantity, and if she suffers, as so many of these cases do, from dyspeptic symptoms, they rapidly disappear. After the first two days, when the stomach is settled, the massage is commenced, and along with it an increased amount of food is administered, commencing with bread and butter, an egg, or the like, for breakfast; then, in a day or two, a chop finely cut up, with some vegetables, is given at midday, and so on progressively, until in from ten days to a fortnight three full meals daily are given, besides from a quart to two quarts of milk in divided quantities, and a considerable amount of soup made from raw beef, after a receipt given in Dr. Mitchell's book. It seems impossible, but it is nevertheless a fact, that under the use of massage and electricity these large amounts of food are taken readily without the slightest feeling of dyspepsia or discomfort. In illustration I copy the food journal on the fourteenth day of treatment of one of my patients, who had been bedridden for many years, and who all that time had existed on a dietary almost as remarkable from its smallness, frequently not taking more than half a tumbler of milk in twenty-four hours, and who could not be persuaded to eat more than one strawberry at a time, as forming a meal too

large for her capacity. The treatment was commenced on October 16 with three ounces of milk every third hour. On October 30 this was what she consumed with appetite: 5 A. M., ten ounces of raw meat soup; 8 A. M., cup of black coffee; 9 A. M., plate of oat-meal porridge, with a gill of cream and a tumbler of milk; 12:30 P. M., milk; 1:45 P. M., whiting, bread and butter, rumpsteak, cauliflower, omelette, and a tumbler of milk; 4 P. M., milk; 5 P. M.. milk and bread and butter; 7 P. M., fried haddock, chicken, cauliflower, apple and cream, and a glass of burgundy; 9:30, P. M., milk; 11 P. M., raw meat soup. (The milk between 8 A. M. and 9:30 P. M. amounted to two quarts.) Nor is this exceptional. In every case I have treated on this plan similar amounts of food were taken, and with the same advantage. Of course, certain difficulties are apt to be met with; but only in one of my cases was any nausea or oppression experienced from the administration of this apparently excessive diet, and in that I attributed the sickness rather to too sudden an attempt to stop the hypodermic injection of morphia the patient had been accustomed to than to the feeding. At any rate, should sickness supervene, a temporary return to milk alone for a day or two will be sufficient to settle the stomach."

To show the results that have been obtained we quote Dr. Playfair's report of one of his cases:

"On September 10 a gentleman came to consult me on the case of his wife, in consequence of his attention having been directed to my former papers by a relative who is a well-known physician in London. He informed me that his wife was now fifty-five years of age, and that she had passed ten years of her married life in India. At the age of thirty she was much weakened by several successive miscarriages, and then drifted into confirmed ill-health. He wrote, on making an appointment, as follows: 'I will give you at once a short outline of her case. We have been married thirty-four years, of which the last twenty has been spent by her in bed or on the sofa. She is utterly without strength, of an intensely nervous temperament, and suffers incessantly from neuralgia. She has moreover, an outward curvature of the spine. There is not the slightest symptom of paralysis. Fortunately she does not touch morphia, or any narcotic or stimulant, beyond a glass or two of wine in the day. That she has long been in the state of hysteria is the opinion of nearly all of the many medical men who have seen her.'"

"Although the attempt to cure so aggravated a case as this was certainly a sufficiently severe test of the treatment, I determined to make the trial, and had the patient removed from her home, and isolated in lodgings. I found her in bed, supported everywhere by many small pillows, and wasted more than, I think, I had ever seen any human being. She really hardly had any covering to her bones, and looked somewhat like the picture of the living skeleton we are familiar with. It may give some idea of her emaciation if I state that, though naturally not a small woman, her height being 5 ft. 5½ in., she weighed only 4 st. 7 lbs., and I could easily make my thumb and forefinger meet round the thickest part of the calf of her leg. The curvature of the spine said to exist was a deceptive appearance produced by her excessive leanness, and the consequent unnatural prominence of the spinous processes of the vertebræ. I could detect no organic disease of any kind. The appetite was entirely wanting, and she consumed hardly any food beyond a little milk, a few mouthfuls of bread, and the like. From the first the patient's improvement was steady and uniform. The way she put on flesh was marvelous, and one could almost see her fatten from day to day. Within ten days all her pains, neuralgia, and backache, had gone, and have never been heard of since, and by that time we had also got rid of all her little pillows and other invalid appliances."

"It may be of interest, as showing what this system is capable of, if I copy her food diary on the tenth day after the treatment was begun; and all this, this bedridden patient, who had lived on starvation diet for twenty years, not only consumed with relish, but perfectly assimilated."

"Six A. M., ten ounces of raw meat soup; 7 A. M., cup of black coffee; 8 A. M., a plate of oatmeal porridge, with a gill of cream, a boiled egg, three slices of bread and butter, and cocoa; 11 A. M., ten ounces of milk; 2 P. M., half a pound of rumpsteak, potatoes, cauliflower, a savory omelette, and ten ounces of milk; 4 P. M., ten ounces of milk and three slices of bread and butter; 6 P. M., a cup of gravy soup; 8 P. M., a fried sole, roast mutton (three large slices), and ten ounces of milk; 11 P. M., ten ounces of raw meat soup."

"The same scale of diet was continued during the whole treatment, and, from first to last, never produced the slightest dyspeptic symptoms, and was consumed with relish and appetite. At the end of six weeks from the day I first saw her she weighed 7 st. 8 lbs.—that is, a gain of 3 st. 1 lb. It will suffice to indicate her improvement if I say that in eight weeks from the commencement of treatment she was dressed, sitting up to meals, and able to walk up and down stairs with an arm and a stick, and had also walked in the same way in the park. Considering how completely atrophied her muscles were from twenty years' entire disuse, this was much more than I had ventured to hope. She has now left with her nurse for Natal, and I have no doubt that she will return from her travels with her cure perfected."

No one can read this little book through without being impressed with the great possibilities which medical science may attain.

ELECTRICITY IN MEDICINE AND SURGERY. By Geo. C. Pitzer, M. D., Professor of the Theory and Practice of Medicine, in the American Medical College, of St. Louis; Clinical Lecturer in the City Hospital, St. Louis; Editor of the American Medical Journal. First edition. St. Louis, Missouri, 1883.

The above little book is printed on good paper, with good type. Having said this we have said about all that can be said in its favor. It contains eighty pages of text,—a hap-hazard jumble of facts and fancies in medical electricity. Thirty pages are devoted to the description of electricity, and a few electrical instruments, the descriptions of the latter being clipped from the makers' catalogues, without even adapting them to the work in hand, and showing plainly that the "author" has not even taken the trouble to read his clippings. Of the remaining fifty pages, (treating of electro-therapeutics) twenty-eight are clippings from medical journals. Twelve pages, that is, one whole quarter of the part on electro-therapeutics, is devoted to the important and absorbing topic of—*removal of hair by electrolysis!* We need say no more about the book. It was evidently made—like the razors that would not shave—just *to sell*—to the guileless students of the American Medical College. D'ARY.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN, FOR THE USE OF STUDENTS AND PRACTITIONERS. By James Nevis Hyde, A. M., M. D., Professor of Skin and Venereal Diseases, Rush Medical College, Chicago; Dermatologist to the Michael Reese Hospital, Chicago; and one of the Physicians to the Infirmary of the Chicago Home for the Friendless. Cloth; pages, 572. Philadelphia: Henry C. Lea's Son & Co., 1883. For sale by John Moore, Ann Arbor.

It will probably be well, in examining a new book like this, to compare its merits with those of older works covering the same field of study. Therefore, we propose to compare Dr. Hyde's work with that of Tilbury Fox. These volumes are about of the same size and discuss the same diseases. We will turn first to psoriasis and endeavor to see how this new claimant compares with our old aid, which has been of so much service to us in the perplexities met with by the young physician in his study of skin diseases. We must say that, while there is no marked difference, we prefer the definition and symptomatology given by Fox. We also prefer Fox's description of the pathology of the disease for its plainness, and the only thing new on this subject, which we find in the more recent work, is the mention of the alleged discovery of Lang of fungous elements in psoriasis. Dr. H., very properly, considers that Lang's statements need confirmation. In the matter of differential diagnosis, though each author has his special merits, we find that Dr. Hyde's discussion is more complete and satisfactory. However, Dr. H. fails to point out the distinguishing features between psoriasis and pemphigus foliaceus, and we have known these diseases to be confounded, especially when there is no recent "crop" of the pemphigus. One certainly is more likely to make a mistake between pemphigus foliaceus and psoriasis than between lupus erythematosus and psoriasis, yet the differential diagnosis for the lupus is given, while that for the pemphigus is omitted. It is in the section on treatment, however, that the superiority of Dr. Hyde's work is most apparent. The difference in this part of the two works represents the advance made in cutaneous therapeutics, since the third edition of Fox's work was written (1873). Since that time, Balmano Squire has introduced chrysophanic acid (1878), which, as a local application in psoriasis, has proved of more universal value than anything else. Fox, of New York, has improved the method of using chrysarobin (1882). Kaposi has introduced beta napthol, (1882), and Squire has failed to find it of value, (1882). Crocker has recommended thymol ointment, and various other improvements have been made by Williamson, Charteris, and Järisch. Dr. Hyde's experience agrees with our own in finding that pyrogallic acid is much inferior to chrysophanic in the treatment of psoriasis. Besides, the former is not a safe remedy to use, and it has been known to produce systemic effects, tending to a fatal result.

There is one, as it seems to us, serious omission in Dr. Hyde's work. We find nothing corresponding to the chapter in Fox's work on "anomalous forms of bullous eruption" (hydroa of Bazin). It has been our experience that these anomalous forms (probably approaching chronic pemphigus more closely than any other typical form) are not so very rare, and if this be true, we hope that Dr. Hyde will supply the omission in the next edition.

In his classification—that stumbling block to dermatologists—the author adopts a very convenient modification of that of Hebra. We would suggest the possibility of sub-dividing the exudative diseases of the author's first class into (1) exfoliative, as psoriasis, (2) serous, as pemphigus, and (3) pustular, as furunculosis and anthrax.

We are glad to present this work to our readers, and we may say that the time has come when America will compare favorably with European countries in cutaneous studies. With Bulkley, Duhring, Piffard, G. H. Fox and Hyde, we can present as great an array of skillful dermatologists as England or Germany. In one point, however, we are much behind the times. We refer to the histology of these diseases. We need a few men who are willing to do thorough work with the microscope. On the pathology, Dr. Hyde follows Heintzman, an author whom we cannot recommend from what we have seen of his work.

SELECTED ABSTRACTS.

THE TREATMENT OF DELIRIUM TREMENS.

BY F. P. ATKINSON, M. D.

In spite of all that has been written of late upon the treatment of delirium tremens and the necessity of supplying the system with nourishment, sufficient attention is not as a rule given to this point. At the same time, it is satisfactory to find the old idea that it requires to be treated on homeopathic principles—*i. e.* that it is necessary to keep up the vital powers by the administration (even if it be in diminished quantities) of that which has been the *fons et origo mali*, wellnigh exploded, and moreover to have it constantly on record that opium, digitalis, capsicum, etc., are powerless by themselves to effect a cure, inasmuch as it makes the thinking minds consider whether the remedies which are usually employed are really suited to the existing pathological condition, and if they fail in their purpose why it is they do not accomplish their end. In the first stage of alcoholism the appetite being fairly good, and the blood corpuscles in fairly normal proportions, chloral is quite sufficient to calm the excited circulation and produce sleep; but in the second stage, when the appetite is bad, the blood corpuscles deficient in quantity and shrivelled, and the brain anæmic and starved, it is useless to expect relief from sedatives unless the brain is at the same time supplied with the nourishment is requires. Death, no doubt, in delirium tremens arises from want of sleep, but then it must be remembered that the want of sleep is caused by want of nourishment. The most important part of the treatment then is to impove the quality of the blood as quickly as possible by throwing into the system frequent supplies of light, nourishing, and easily digestible food, and the best way of accomplishing this end is by cutting off all stimulants and ordering half a tin of Brand's liquid essence of beef, and half a pint of milk to be taken alternately every two hours. As regards medicine, twenty-five grains of chloral with thirty minims of compound tincture of cardamom, in an ounce of water, taken every four hours, after the beef tea will be found most useful. Very little effect, though, is produced by the first dose of the chloral, inasmuch as the brain is without the nourishment it requires, but after the second dose the food begins to tell—some sleep, generally speaking, results, and this goes on increasing in proportion as the support is maintained. If nourishment is withheld, sleep disappears, and the old delirium returns.

By this treatment the patient is generally free from all delusions in about thirty-six hours, but good strong liquid food must still be taken for some days, though not quite so frequently. When there have been from ten to twelve hours more or less continuous sleep, then it is advisable to give up the chloral, and give thirty minims of compound tincture of gentian with five minims of the tincture of nux vomica three times a day for about three days. This restores the tone of the nervous system and stomach, and creates an appetite. A little tincture of euonymin may next be substituted for the nux vomica, and some Carlsbad salt may be given in the morning when required. By this treatment the duration of the delirium and the after effects of the alcohol are very much lessened.—*The Practitioner.*

MULLEIN PLANT IN CONSUMPTION.

Dr. Quinlin, after describing several cases which were benefitted by mullein, continues as follows: "I have set down the above cases simply in the order in which they occurred, and with no view of supporting any preconceived idea. These cases, although too few to justify any general conclusion, appear to establish some useful facts. The mullein plant boiled in milk is liked by the patients; in watery infusion it is disagreeable, and the succus is still more so. The hot-milk decoction causes a comfortable (what our Gallic neighbors call *pectorale*) sensation, and when once patients take it they experience a physiological want, and, when the supply was once or twice interrupted, complained much in consequence. That it eases phthisical cough there can be no doubt; in fact, some of the patients scarcely took their cough mixtures at all—an unmixed boon to phthisical sufferers with delicate stomachs. Its power of checking phthisical looseness of the bowels was very marked and experiment proved that this was not merely due to the well-known astringent properties of boiled milk. It also gave great relief to the dyspnœa. For phthisical night-sweats it is utterly useless; but these can be completely checked by the hypodermic use of from one-eightieth to one-fiftieth of a grain of the atropia sulphate, the smaller dose, if it will answer, being preferable, as the larger causes dryness of the pharynx, and interferes with ocular accommodation. In advanced cases, it does not prevent loss of weight, nor am I aware of anything that will, except koumiss. Dr. Carrick, in his interesting work on the koumiss treatment of Southern Russia (page 213) says: 'I have seen a consumptive invalid gain largely in weight while the disease was making rapid progress in her lungs, and the evening temperature rarely fell below 101° Fahrenheit. Until then I considered that an increase of weight in phthisis pulmonalis was a proof of the arrest of the malady.' If koumiss possesses this power, mullein clearly does not; but, unfortunately, as real koumiss can be made from the milk of the mare only, and as it does not bear traveling, the consumptive invalid must go at least to Sumara or Southern Russia. In pretubercular and early cases of pulmonary consumption, mullein appears to have a distinct weight-increasing power; and I have observed this in several private cases also. Having no weighings of these latter, however, makes this statement merely an expression of opinion. In early cases, the mullein milk appears to act very much in the same manner as cod-liver oil; and, when we consider that it is at once cheap and palatable, it is certainly worth a trial. I will continue the research by careful weighings of early cases; and will further endeavor to ascertain whether the addition of mullein to the cultivating solution prevents the propagation of the phthisical bacillus.—*British Medical Journal.*

SILVER *VS.* ELASTIC CATHETER IN HYPERTROPHY OF THE PROSTATE.

In this age so ripe with new inventions in which both large and small things bear a part, one is repeatedly reminded in the daily routine of work how advisable it is not to place too much reliance on this or that form of instrument, or on any particular drug, but strictly to take each case on its own merits. In reporting to the *Journal*, we cannot be accused of egotism, but rather in its weekly perusal gladly accept hints of any successful treatment, therein described by our colleagues, occurring in private or hospital practice. I was sent for to meet in consultation a medical man in charge of a case which comes under the above heading. W. J., aged about eighty, comfortably off, strong and active for his years, was suddenly taken with retention of urine. His usual medical attendant and his assistant had been with their patient all night; but, as no relief could be obtained even by the aid of various sizes of the silver catheter, I was called in. I found the exciting cause of retention probably due to over physical exertion, culminating in spasmodic stricture combined with enlargement of the prostate; and as the bladder was very distended, it required speedy emptying. The medical man again used a silver catheter without any result, then handed the case to me. As it was decidedly urgent, I immediately well oiled a medium-sized gum elastic catheter, and with firm pressure and a turn of the wrist in about two minutes easily passed the instrument into the bladder. If this had not occurred, for the sake of life we must have forced a silver catheter through the prostatic urethra, or else punctured the bladder by the rectum or above the pubes. The instant and happy relief procured in this case shows that it is not the surgeon's hand *per se*, but the means used that accomplishes the end.—T. Wells Hubbard in *British Medical Journal.*

THE VENOM OF THE COPPERHEAD.

Dr. Isaac Ott draws the following conclusions from an experimental study of this subject:

1. The venom of the copperhead is weaker in toxic activity than that of the rattlesnake.
2. The heart, with both kinds of venom, becomes greatly prostrated, and in rapid deaths is their main cause.
3. The venom of either snake does not affect the sensory nerves.
4. The sensory centres are affected by both venoms.
5. The muscular excitability continues to be little affected at the time of death by the poison of the copperhead.
6. The two venoms greatly resemble each other in physiological activity.
7. The cardiac force, rhythm, and frequency are lowered by both venoms.
8. The arterial tension is greatly lowered by both venoms.
9. The blood, after copperhead poisoning, shows no microscopic changes of its globules, or any difference in its spectrum.—*Virginia Medical Monthly.*

TREATMENT OF DIPHTHERIA.

'The treatment of diphtheria by steam from blue-gum (eucalyptus globulus) leaves is recommended by Mr. J. Murray Gibbes, of New Plymouth, N. Z., in the London *Lancet.* He had been experimenting for several years with eucalyptus in different diseases with good results, and being aware of its disinfecting power, he had used it in thirty-seven cases of diphtheria, during an epidemic of the disease which occurred near New Plymouth, without the loss of a single case, and without any bad symptoms, as paralysis, following. No medicine was given during the course of the treatment, except a dose of castor oil, and no stimulants were employed. The eucalyptus leaves were put into a tub, jug or chamber placed beside the bed, and boiling water poured upon them. This was repeated every half hour, so that the atmosphere was kept moist with the disinfecting steam. The throat was mopped every eight hours with a dilute solution of perchloride of iron and glycerine, and the pharynx covered with powdered sulphur. This was done in most cases, but those in which it was not carried out did equally as well. He says that an old lady, who had her throat mopped once, refused to have it done a second time, and though she had a dense patch behind and on the right tonsil, with enlarged cervical glands, and very offensive breath, she made a perfect recovery, half of the membrane coming away on the third day in pieces like grains of rice. The last cases occurred in two families where there were five children, these and the nurse were attacked, and of the number he attended the first and the last one of the children taken down, and the nurse, all of them recovering, whilst the other three, who were attended by another physician, died. He says that judging by the number of deaths among those who were treated by other means, the epidemic was a very severe one. Where only one child is sick, he recommends that a tent be formed of a sheet and spread over the bed so as to enclose the patient, and says that it is wonderful how soon the swelling and pain in the throat and fever disappear. One of the advantages he claims for the eucalyptus steam treatment is that it can be entrusted to the ordinary attendants, and mentions the fact of a farmer treating seven cases, all of which recovered, though in one of them the membrane reappeared several times for three weeks.—*Weekly Medical Review.*

TREATMENT OF DYSENTERY.

At the present time, when dysentery is very prevalent, especially amongst those who have returned from the Egyptian war, any suggestion that may mitigate the suffering of so fatal a malady will be hailed with gratitude. The plan I have used with most success is the following: First, having placed the patient between warm blankets, I proceed to inject the patient with a pint and a half of warm water, at a temperature of 90° Fahrenheit. This is seldom retained longer than a few minutes, but is pronounced very grateful to the patient. When the water has soothed the mucus membrane of the colon and rectum and brought away any *effete* matter, I then proceed to administer a small injection of two ounces, by measure, with a gum-elastic bottle. The form I administer is the following: ℞ Quinine disulphate ten grains; compound tincture of camphor four drachms; decoctum amyli to two ounces, Mix, and when about milk-warm, inject. It is generally retained, but, if ejected, it may be repeated after an hour or two. This I have found of great service and very grateful to the patient. I do not stop to inquire how it acts, but the effect is like magic. If griping pains be felt over the region of the epigastrium, I administer half-drachm doses of chlorodyne, in some aromatic water, mint, carraway, or aniseed. The diet, of course, should be of the most soothing kind: jellies, isinglass, linseed. toast and barley water, *ad libitum.* Ipecacuanha I have found of little service, and have discarded it from my treatment. If any of my medical brethren will try these measures, he will not often be disappointed. I have used with advantage warm turpentine stupes on warm flannels, over the hypogastrium."—F. Rawle, *British Medical Journal.*

TRANSMISSION OF SYPHILIS.

Dr. Lesser formulates (*Deutsche Med. Leit.*) his experience bearing upon this question in three propositions: (1) Both or either of the parents diseased before impregnation, may transmit syphilis to the offspring; (2) Both parents being healthy at the time of conception, yet the mother can infect the fœtus by means of the placental circulation; (3) The father being infected, the mother remaining healthy till after conception, the latter may yet become diseased from the fœtus by way of the placental vessels, or her constitution may be so altered as to render her proof against syphilis. This last proposition Lesser gives as tentative, but as best explaining the present known facts.—*Medical Times and Gazette*, London.

THE CUTANEOUS MANIFESTATIONS OF PALUDISM.

In a paper on this subject by Verneuil and Merklen ("Ann. de dermat. et de syphil.," November, 1882), the following are the conclusions arrived at:

1. Herpes is one of the common manifestations of malarial disease.

2. It may either precede the paroxysm of intermittent, or occur during any one of the three stages of the paroxysm, or it may follow the stage of sweating. It may appear even after the paroxysms of the fever have been suppressed by means of sulphate of quinine. There is no etiological connection between the herpes and the fever, notwithstanding their frequent coincidence.

3. Paludic herpes does not present any peculiar features. Its most common locations are the face, the region about the lips and nostrils, the eyelids, the cornea, and such points as are most abundantly supplied with nerves. Though ordinarily discrete, in certain epidemics the eruption presents a remarkable tendency to confluence.

4. Black crusts, or, more especially black vesicles attending the herpes, pertain to grave and pernicious forms of malarial fever.

5. Exceptionally, the herpes of malaria takes the form of zoster.

6. The ordinary forms of malarial herpes may be preceded by and accompanied with vaso-motor disturbances upon the surface of the skin and disorders of sensibility.

It is believed, in consideration of the habitual locations of the eruption, of its concomitant disorders, of its possible appearance in the absence of a febrile attack, that the cause of the disease is referable to a nervous lesion, perhaps to a congestion of the cutaneous nerve-branches, resulting from the localization of the malarial poison in these nerves.—*New York Medical Journal.*

"PATIENTS AND PATIENCE."

A POEM READ BEFORE THE GRADUATING CLASS OF 1883, OF THE ATLANTA MEDICAL COLLEGE, BY EX-CHIEF JUSTICE LOGAN E. BECKLEY.

The question of questions is now to be met!
The practical question, how patients to get?
The patience of Job, since Job has retired,
May either be purchased or borrowed or hired;
The first thing to ponder—to ponder and probe,
Is how to acquire the patience of Job.
When he was in practice his patience was much;
And every young doctor needs plenty of such—
The patience to labor, to learn and to wait,
To suffer, endeavor, endure, and be great.
Job's practice was simple; his treatment was what?
Some ashes, and scraping with pieces of pot;
Then silence a week; then cursing a day;
Then railing at everything others could say.
How unscientific! and yet, as we read,
No practice than his could better succeed.
The patient recovered—remained on the stage
Through four generations, and died of old age.
The fee was a fortune! He got, we are told,
Unlimited money and ear-rings of gold—
With camels, and asses, and oxen, and sheep,
By thousands—much more than his pastures would keep.
Ah, Job had the patience, the time, and the place!
His riches, remember, were all for one case.
Whatever you covet, or merit, or earn,
Depend upon patience to make the return.
Your science and learning, you latest M. D.'s,
Your medals and honors, diplomas, degrees,—
Why, Job's were as nothing contrasted with these,
But they never will bring in such fabulous fees.
If doctors have patience, the patients will come;
Some cannot have all, but they all may have some;
If patients have patience, 'tis safe to foretell
That twelve to the dozen are sure to get well.
Whoever says "patients" has "patience" to say:
By name and by nature, in both there is pay.
That like will cure like, is the hint that peeps through:
"*Similia similibus curantur,*" often is true.

—*Medical News.*

APOMORPHIA IN CASES OF POISONING.

Dr. Amand Routh, writes of this remedy as follows: Those liable to be called to cases of poisoning, are always glad to have an agent handy, which, not in itself lowering, will produce prompt emesis, especially in those cases where the jaws are rigidly clenched and the stomach pump inadmissible. This agent I am sure we have in apomorphia, an alkaloid which Dr. W. Murrell has brought before the profession. Though a derivative of morphia, it has no narcotic effect in the doses required to cause emesis. Dr. Murrell recommends it to be kept in a solution of one in fifty strength, and to be given subcutaneously in doses from three and one-half to ten minims (one-fifteenth to one-fifth gram). Emesis occurs in from two to five minutes, the contents of the stomach being usually voided in one rush without previous nausea, but with violent and visible muscular action of the stomach walls.

Apomorphia fails to cause emesis during chloroform narcotism, but no other drug seems to be antagonistic to it, and there is no reason why it should not be given to get rid of even morphia itself. In the dyspnœa of chronic bronchitis, emesis from apomorphia produces temporary relief. If only the certainty, rapidity, and absolute safety of apomorphia were known it would undoubtedly form a part of every practitioner's paraphernalia—*Lancet*

CLINICAL LECTURE ON PESSARIES IN MINOR DISPLACEMENTS.

BY J. MATTHEWS DUNCAN, M. D., LL. D.

Think twice before beginning the often baneful practice of using any instrument, which, if not positively useful, may be positively injurious. Many a woman has suffered from, and many a woman has died of, a pessary. Most pessaries, as I find them in use, are nearly innocuous. They are always harborers of dirt; they always keep the mind watching the part; they are all liable to decay. They all are undesirable additions to the contents of the pelvic cavity.

Intra-uterine or stem pessaries are the only instruments you can rely on for straightening the uterus or keeping a flexion undone. They have been three times introduced into practice within this century, but the practice has never flourished. They are far more injurious and dangerous than the condition they are intended to modify. The evils of intra-uterine pessaries have led to great ingenuity in attempts to correct flexions by vaginal instruments. In retroflexions they are often successful. But the curious anteflexion pessaries: If they give relief, it is not done by undoing the flexion and keeping the womb straight.

It is not a simple matter to judge of the part taken by a pessary in relieving or removing painful symptoms. Many patients are alarmed at the idea of having a displacement, and believing the pessary cures it, wear an instrument with satisfaction and even pleasure, although it gives them new pains or increases what they had before. Such patients object to its removal, even when removal gives relief, and when told that when in, does not alter the condition of displacement. In such difficulties, you must guide your patient's mind aright, acting on two principles: First, do not let harm come through your treatment. Second, that practice overrules all theories in the present imperfect state of our knowledge; that is, if your patient gets real relief from any kind of pessary that does not do important harm, let her have that relief.

A pessary may replace a descended, or retroflexed or retroverted uterus, but cannot cure a displacement. Minor displacements are incurable by any kind of instrumental treatment. Displacements sometimes disappear, are cured spontaneously or by aid of proper treatment. A woman gets rid of chronic inflammation of the cervix and relaxation of the vagina, and then the uterus ascends. Changes in the size of the uterus, in the retentive power of the abdominal walls, in the quantity and disposition of fat, effect the position of the uterus.

A pessary often gives relief, even when small and doing nothing. In such cases, practical success must overrule theory. In these cases a pessary may maintain a diminished degree of descent, and may prevent increase of descent on walking, and may save a tender part of the uterus from pressure on sitting. Flexion may be the prominent feature, but the case is one of descent—not of flexion.

One of the best examples of relief by a pessary, is observed in the anteversion (by probe) of an engorged retroverted and descended uterus. Here a well-fitting Hodge is comforting, maintaining the anteflexion, elevating the uterus, and preventing relapse into retroversion, or retroflexion by keeping the posterior wall of the vagina pressed against the sacrum. Another example of relief is seen in descent with tendency to cystocele. In such, a suitable sized Hodge or india-rubber ring often by its anterior limb, just catches the cystocele and obviates the tendency to protrusion through the os vaginal.

If a pessary is to be useful, it must fit the patient in size and contour, and will give relief at once. A well-fitted pessary will need very little attention, and can be worn for months without being attended to. A pessary will be inefficient without a fair amount of perineum to support it, and if the vagina is not long enough and capacious enough to allow of its action without strong pressure on the vaginal wall. In flexion or version, without descent of the whole organ, you can do no good to the version of flexion by a pessary; you have no basis or fulcrum to work from.—Abstracted from *Medical Times and Gazette.*

TREATMENT OF BENT TIBIÆ IN CHILDREN

The *British Medical Journal* publishes a paper read by Charles Steele, M. D., at the annual meeting of the British Medical Association, on those mild cases of bent tibiæ, where the inner surface of the shaft of the bone, instead of being straight, presents a curve outwards and backwards. This condition gives a twist to the ankle, which carries the foot with it, and compels the toes to turn inwards. The feet cannot be turned outwards when walking, without straddleing the knees; but when the curved tibiæ are made to assume the normal straight line, the feet naturally turn straight and can then be turned outwards. If not detected and treated early, bandy legs probably result; but when detected, whether late or early, the condition can be remedied by the use of irons, persistently applied for some time. But irons are objected to, because they are conspicuous, and in young children are likely to tax their strength. Wooden splints are not satisfactory, as they are liable to be misplaced or kicked off while the child is asleep.

The writer remarks that all obstetricians must have observed how newly born infants' limbs when extended, rebound into the bent position they occupied in the uterus. It is well-known, also, that a good nurse, by daily manipulations, can cure even pronounced talipes. What is needed, therefore, for treatment, is an elastic power, acting directly upon the bone, which can be worn when the child is awake and active, and particularly during the long hours of rest. If the upper end of the tibia be clasped with one hand, the lower end with the other, and both thumbs pressed on the outer surface of the bone, with gentle firm pressure, the bone can be soon made to assume almost a straight line. A small steel spring, devised by him (Dr. Steele), accomplishes the same results. It consists of a spring shaft well curved outward, leaving the lower extremity cupped to cover the malleolus of fibula, and to the upper extremity fixed a transverse band of malleable iron to partly embrace the limb below the knee. In applying the splint, the center of the spring and the lower portion are bandaged in position; then the upper end is pressed to the limb, the soft band moulded to the surface, and the bandaging completed. The splint should not be strong when mild and well-fitted. Mothers and nurses readily apply them, and the children wear them willingly.

COLORED HEARING.

A curious, and but little known fact, is that with certain individuals the hearing of sound is always accompanied by sensations of color. The first published observations upon this subject seem to have been made by Nussbaumer (*Wiener med. Wochenschrift*, 1873). Both this writer and his brother habitually experienced such double sensations, and even found that with each note of the musical scale a special color always appeared. Bleuler and Lehman afterward confirmed these observations, and reported that they had examined five hundred and ninety-six individuals who had this peculiarity. These cases all occurred in Germany. An article on "Color Hearing" appeared in the *London Medical Record* in December, 1881. In the November number of the *Annales d' Oculistique*, Pedrono reports in detail a case of this kind. The individual who is the subject of these double sensations discovered quite accidentally that his condition was peculiar. He had always been conscious that sound, especially that of the human voice invariably awakened a sense of color, and that the same voice always called up the same color. On one occasion, however, a person speaking to him of a friend said, "Have you remarked his voice? It is as pretty as a yellow dog." Pedrono's patient replied very seriously, "Not at all, his voice is red, not yellow." Whereupon the bystanders roared with laughter.

Pedrono found in this case that each note of the musical scale produced a sensation of color; but although his subject was an excellent musician, he was not able to define a special color for each note. High notes were accompanied by brilliant, low by sombre colors. But if two consecutive notes of the scale were compared, the colors appeared nearly identical. In a perfect chord a single color was produced. For instance, the chord in F major produced yellow, while that in A minor produced violet. But in an imperfect chord some of the notes detached themselves with their proper colors, although very near the general hue.

There was no appreciable difference between the colors corresponding to major and minor tones, between scales in sharps and flats. The same piece of music played upon different instruments produced different colors, showing the effect of timbre. For instance, the Bretonne melody, *Appel des Pâtres* played on a tenor saxophone was yellow, on a clarionet red, on the piano blue. Intensity of sound produced distinctness of color. With feeble sounds the color seemed to show vibrating movements.

Noises of all sorts provoked chromatic sensations, but the colors were always sombre, generally gray or brown. When the voice was used in a conversational tone the vowel sounds only were colored, *i* and *e* being the most brilliant, *u* the most sombre and *a* and *o* intermediate. The general hue depended upon the timbre of the voice. If the voice was very strongly emitted, the consonants became barely perceptible, the sibilants being brightest. Singing simply intensified these results, each voice retaining its characteristic color. Blue voices were much the most numerous; green the most rare; yellow the most agreeable; red voices were not unfrequent. Of course, different voices represented all shades of these colors.

As to the localization of the colors, all observers seem to agree that they are projected mentally to a point just above the supposed position of the instrument which is sounding or the person who is speaking, and without reference to whether the subject is seen or not. A vibrating guitar string appears to be surrounded with color, and a layer of chromatic air rests upon the keys of a sounding piano.

If anything additional to the phenomena of monocular color blindness were needed to demonstrate the existence of cerebral centres for the perception of colors, independently of all other ocular sensations, the facts adduced, in connection with the phenomena of colored hearing, would seem to be sufficient. If this be admitted it would seem unnecessary to imagine an anatomical arrangement of the nervous elements of the retina capable of analyzing luminous rays. Such analysis would be more fittingly performed in the great central cerebral laboratory, and the ingenious, but artificial and gratuitous, theories of Young, Helmholtz, Hering, etc., would be no longer required. The part played by the retina then is possibly merely to furnish the necessary sensory apparatus capable of being excited by light and color in their varying phases. But the resultant molecular vibrations of the optic nerve fibres affect, according to their nature, the appropriate cerebral centres of light, form or color.

Whether the auditory and color centres are contiguous or are distant and connected by abnormal nerve fibres, in color hearers, it is perhaps useless to discuss here. But as sounds and colors do not correspond in all cases the latter supposition may possibly be correct. With Nussbaumer each musical note produced constantly a special sensation of color, but in Pedrono's case the color was determined by the timbre of the voice or instrument.

It seems to us that the appelation "Colored Hearing" is more applicable to this class of cases than the title "Color Hearing" which has heretofore been used. As the color perceived is manifestly a subjective excitation of the cerebral color centre, and only accompanies the sound, it is evident that the person cannot be said to hear colors which do not exist, but only that the sensation of hearing is attended by color.—*Medical News.*

THE TREATMENT OF SOME CHRONIC GASTRIC DISORDERS.

M. Broca, in a series of articles, strongly advocates, in ulcers of the stomach and chronic gastritis from various causes, the systematic washing-out of the stomach and artificial feeding. In washing out the stomach there are two indications to fulfil —one, to empty it of its contents, whatever they may be; and the other, to treat the diseased mucous membranes with medicated solutions. He advocates the use of the siphon-tube, on the ground that its manipulation is so easy that in a very short time the patient can learn to wash his stomach out himself. The washing over, the patient should be fed before the tube is withdrawn, powdered meat, raw eggs, milk, or broth being the most suitable food. He lays great stress on the advantages of over feeding the patient, and mentions six hundred grammes of raw meat, a dozen eggs, and three litres of milk as a daily allowance that may easily be exceeded. It is always necessary to commence gradually, until it is ascertained that the patient can digest milk and eggs well. Should pain come on some hours after the meal, it is advisable to empty the stomach by means of the tube. The cure is permanent if the patients only take proper care of themselves afterwards. He thinks that this mode of treatment might with advantage be extended to other than purely gastric disorders; he suggests it, for instance, in advanced phthisis.—*Le Progrèss Médical*, 39-42, 1882.—*The Practitioner.*

AMERICANITIS.

In communications to several English journals, Mr. Mathiew Williams suggests that the typical Yankee, lank and shrivelled, is a "desecated Englishman," produced "by the dryness of the continental climate of America, exaggerated in winter-time by the stove arrangements." He certainly cites some curious facts. Mr. R. A. Proctor, in each of his three visits to this country, lost about thirty pounds, which were recovered on his returning home. Mr. Williams's son, coming to Washington to assist Major Herschel, soon showed he was in a high pressure condition, both mental and physical. Mr. Williams says "he was evidently in a state of abnormal excitement—a sort of dry oxygen excitement.

He went to New York, where he became "dazed," and was sent home. "During his short absence, he had grown thinner and taller, lank-jawed and sallow, displaying all the characteristic symptoms of what I cannot refrain from calling acute Americanitis." Mr. Williams concludes that this Americanitis must develop, is developing, and has developed constitutional chronic disturbances, or even disease, which may be curable by change of climate, and that old England will become the sanitarium.—*Medical Times and Gazette.*

STRANGULATED HERNIA AND THE TREATMENT OF OMENTAL PROTRUSION.

Dr. John Tudor, of Dorset County Hospital, England, reports in the *Lancet*, five cases of strangulated omental protrusions treated by him, in which he cut down through the sac, passed a double ligature through the neck of the tumor, firmly tying both sides, then cutting the mass away, keeping the stump *in situ* and maintaining free drainage. The subsequent treatment consisted in giving opium freely, and covering the abdomen with hot fomentations. Constipation and tympanitis are relieved by enema of castor oil, turpentine and opium.

The writer observes: That the plan of passing a ligature around the omentum and allowing it to slough away, has been long abandoned. The different methods now followed seemed to be to return the omentum or to excise it. Two ways are suggested for carrying the latter into effect: First, by severing the mass and tying the bleeding vessels; and, secondly, by passing a double ligature through what might be called the neck of the protrusion and securing it on either side; then excising either by knife or scissors the mass in front, allowing the ends of the ligatures to hang out of the wound to the extent of several inches. As regards returning the omentum with the gut, into the abdomen, I should always feel the risk of injury to so delicate a structure, however carefully manipulated. And where the protruded part is long, or where it has been down for a length of time, it would appear almost impossible to avoid rupture or tearing, and hence probably establishing a centre of inflammation, leading to peritonitis and its serious consequences.

CONVALLARIA MAJALIS.

Professor Robinson (*New York Medical Journal*) contributes the following notes on this new drug:

During the past three months I have made use of the fluid extract of convallaria majalis in quite a number of cases of chronic cardia disease. In it I recognize a new cardiac tonic of considerable value. It should be approximated in its therapeutic effects with those of caffeine and digitalis. Not that it resembles closely in all its properties these well-known drugs, but because it is analogous to them in having an appreciable stimulating effect upon cardiac power. When the fluid extract of the root of convallaria has been given in suitable doses (five to ten drops every two or three hours) to patients in whom cardiac incompetency is already apparent, in view of the rational symptoms of dyspnœa, oppression, localized pain over the præcordia and palpitations, it will aid in diminishing these phenomena in a notable degree. When we have, in addition to these functional symptoms, the ordinary physical signs of cardiac disorder, such as weak, rapid and irregular pulse; tumultuous, unequal heart-beats, with a blowing murmur at one or other orifice; œdema of the lower extremeties, with more or less serious effusion into the large cavities of the body —we shall also be able to remark a certain amount of benefit arising from its use. Thus, the pulse becomes stronger and more regular, the heart-sounds acquire additional force, and the painful palpitations disappear. Dyspnœa is often favorably modified, and the respiration becomes slower and deeper. Anasarca is not usually much influenced by the exhibition of this drug, and the urine is scarcely, if at all, increased in quantity, nor are its solid constituents manifestly modified in their eliminated quantities. Usually the stomach accommodates itself well to the use of this drug, and in those cases where I have observed intolerance following its exhibition I have attributed the nausea, or rejection, to beginning uræmic condition.

While I believe that this drug has some power in controlling cardiac action, I am of the opinion that this is exercised mainly through the pneumogastric nerves, and not upon the muscular fibres directly in any considerable degree. This view appears to me to be sustained by its obvious effects in diminishing the intense dyspnœa of asthma, and in quieting palpitations in a remarkable manner. I have not found that convallaria restored rhymic action to the crippled heart in a degree sufficient to make it in this regard a co-equal substitute of digitalis, nor am I convinced that it is the peer of digitalis in adding to cardiac contractility. Over digitalis, however, it has apparently *one* very great advantage—viz., it does not in man, at least, and in the doses mentioned above, take on cumulative effects, or produce any poisonous symptoms, which have been feared on account of its well-known pernicious action, even in relatively small doses, upon the lower animals. As compared with the use of caffeine, I would say that it is greatly the inferior of this latter drug when we desire to obtain considerable diuretic effects. As to the comparative power of these two drugs in their action upon the heart, it is as yet impossible to assign their precise place. Still, I am disposed to think that convallaria is somewhat more of an invigorator of cardiac power than caffeine is. At all events, in man its action is a less variable quantity, for while caffeine, in even small doses of two or three grains, will occasionally produce congestive phenomena of distressing character, and, again, in similar or much larger doses, will prove inert, convallaria appears to produce about similar effects in persons of different temperament. Thus far, in my own experience, convallaria has been more readily accepted by a sensitive stomach than either caffeine or digitalis.

LARGE DOSES OF ARSENIC IN CHOREA.

The dose of liquor arsenicalis in chorea, as laid down in text books, is too small. Chorea is often an obstinate affection. Arsenic, freely and properly given, rarely fails. In a case of sub-acute general chorea, of moderate severity, occurring in a weakly, nervous little girl ten years old, Fowler's solution of arsenious acid was freely given. The treatment began with five minims thrice daily in an ounce of water; in three days the dose was increased to ten minims; in three days more to fifteen; in three days more to twenty; in three days more to twenty-five, and so on until she was taking thirty-five minims thrice daily. When this last dose was reached the choreic movement entirely ceased; and a little vomiting showed that the first usual physiological action of the drug had been reached. The remedy was stopped for two days, then resumed in fifteen minim doses, for a few days more. If a case comes to you, and you learn that arsenic has been given and has failed, give it again in larger doses. You may cautiously increase the dose of liquor arsenicalis far beyond the limits of the text books, with the best results in chorea; in this way you may usually cure cases which smaller doses of the remedy would not effect—Abstract of Clinical Lecture by James Sawyer, M. D.—*British Medical Journal.*

THE MOVEMENTS OF THE BOWELS IN HEALTH AND DISEASE.

Perhaps there is no function of the body which plays a more important part in various morbid conditions of the abdominal viscera than the movements of the bowel; and certainly there is none which, in its pathological relations, has received less experimental study. Uncertain inference from clinical symptoms is almost all that physicians have had to depend upon in their diagnosis, and in their endeavor to alter by treatment that which they assume to be present. As an instance, we may adduce the difference of opinion which has existed and still exists among distinguished authorities on the question whether there ever is, in morbid states of the bowels, what has been miscalled an antiperistaltic action—a question of great importance in many acute disorders.

Thanks to the well-directed energy of Nothnagel, and so far as animals can furnish it, we have some definite knowledge. He has made a series of experiments to ascertain by actual observation what modifications the intestinal movements undergo in morbid states. The experiments (described in the *Deutsche Zeitschrift f. klin. Med.*) involved no suffering to the animals concerned. All were kept insensible by ether—dogs and cats by inhalation, rabbits by subcutaneous injection; and all were killed by division of the medulla oblongata as soon as the experiment was over, and before the return of consciousness. The method employed was that of Sanders and van Braam Houckgeest, of keeping the animal, with abdomen opened, immersed, with the exception of the head, in a one-half per cent. saline solution, at a uniform temperature of 100.2° Fahrenheit. Under these circumstances, as the originators of the method pointed out, rest is the rule in most parts of the bowel, with the exception of the duodenum, Now and then, at rare intervals, there is a gentle peristaltic movement in the small intestine, and local irritation causes only a local effect, without producing any trace of general peristalis. But the condition is changed at once by the presence of a quantity of gas and liquid distending part of the bowel. This is immediately moved forward by a stormy peristalsis, a circular contraction behind it pushing the distended portion onwards to the cæcum. Sometimes, however, the movement suddenly stops, to go on again after a brief pause. It is distinctly analogous to the sudden temporary cessation of griping pain which is familiar to most people. Nothnagel can discover no cause for it, except a sudden inhibitory nervous influence, which its aspect suggests.

As regards the first fundamental question—the occurrence of antiperistalsis—Nothnagel entirely corroborates the statement of Engelmann, that the intestinal contractions may take place either upwards or downwards. But the last-named observer, experimenting with the intestine exposed to the air, was in error in assuming that peristaltic action, upwards or downwards, was set up by any logical irritant. When the bowel is preserved from the air by the saline solution, local irritation causes a local constriction, if the bowel was previously at rest. Moreover, Nothnagel concludes, from a series of sixty observations, that antiperistalsis never occurs in the normal uninjured intestine, so long as no pathological influences are brought to bear upon it.

The effect of injections into the rectum was next investigated, the injections being of indifferent or irritating liquid, tinted with carmine, so as to show how far it was sent up the intestine, and post-mortem examination subsequently showed whether it had been carried higher by any movement of the intestine itself. A small quantity of warm water (from two to five cubic centimetres) had no effect; it remained in the rectum until ejected by a contraction, or until it was absorbed. A somewhat larger quantity distended the rectum, but seemed to excite little peristaltic action, some of it escaping in consequence apparently of the elasticity of the bowel. Iced water caused constriction, which passed a short distance upwards so as to move the injected fluid up from five to twenty centimetres. Olive oil gave a similar result. Of greater significance, however, was the effect of a strong solution of chloride of sodium. A small quantity, three to five cubic centimetres, passed up, by the force of the injection, about ten centimetres. In a few minutes, however, the colored liquid was carried upwards by a distinct ascending contraction, and the antiperistalsis gradually carried it, together with a mass of feces, as high as the cæcum. Sometimes the antiperistalsis took the form of a series of circular constrictions, especially marked at the highest part of the column of liquid. Besides this, descending contractions occurred in the lowest part of the rectum. Similar results were obtained with injections of concentrated solutions of mirate of potash and bromide of potassium, and weak solutions of sulphate of copper.

Nothnagel found that the needle of a hypodermic syringe could be passed through the wall of the small intestine without exciting local contraction, and the minute wound immediately closed without allowing the escape of the intestinal contents. Injections of chloride of sodium were found invariably to cause contractions which passed upwards as well as downwards. In a case of ileus in the human subject he found that chloride of sodium solution had evidently the same effect as in animals, since a small colored injection into the rectum was found after death to have passed upwards some distance above the cæcum. The fact may possibly prove of great practical importance in the treatment of intestinal obstruction. The injection of indifferent fluids of the temperature of the body had as little effect on the small intestine as on the rectum. The conclusion from this series of experiments is that when the intestine is under normal conditions, or contains only unirritating contents, the peristaltic contractions occur only in the direction from the stomach towards the anus. If, on the other hand, the contents of the bowel consist of an irritant substance, the stimulant causes contractions to pass also in the opposite direction. Nevertheless it was found that the latter only occurs when the irritant substance is introduced into the bowel in, so to speak, an unphysiological way. A solution of sulphate of copper was injected into the stomach, and quickly passed into the bowel, but, entering it thus, it caused only descending peristaltic contractions. Hence we must assume that, so to speak, preformed arrangements exist, of an anatomical or physiological nature, which determine the direction of the movement.

How does fecal vomiting occur in cases of obstruction of the bowels? It will be remembered that many authorities, from the time of Van Swieten, have asserted that it does not occur by antiperistaltic contractions. Van Swieten maintained that it was by the action of the diaphragm and abdominal muscles, and Brinton urged with great ability, that its mechanism must be a reflex current in the centre of the distended intestine, opposed in its direction to that of the peristaltic action. Van Braam Houckgeest and Lichtenstern have experimented on the subject, and were unable to discern any ascending contractions. Nothnagel has made a large number of experiments on this subject. Ligature of the small intestine caused in some cases very little effect. The intestine above gradually became filled without any marked contractions, and the portion below gradually became emptied. In other cases, however, a series of vigorous contractions passed down from the stomach, and distended the part immediately above the ligature, ceasing in the distended portion, and as this extended upwards higher, the section in which the peristaltic contractions occurred, became smaller and smaller, until it was reduced to a narrow segment near the pylorus. After the distension had existed for half an hour, local contractions could no longer be excited by mechanical stimulation; the intestine was evidently paralyzed. In these cases there was no antiperistaltic action. In others, however, the descending contractions on reaching the ligature seemed to return up the bowel for a very short distance, and were even augmented in force just above the ligature, so that the intestine here was emptier than it was higher up. There was no regular antiperistaltic action, and after a short time these "rebounding contractions" ceased, and the distension and paralysis went on as just described. Sometimes, however, the peristaltic action quickly ceased, but the distended bowel seemed to undergo a slow imperceptible contraction, which caused its contents to pass upwards, because the ligature prevented them from passing downwards. In a series of experiments in which the intestine was ligatured through a small opening in the abdominal wall, and was returned into the cavity for some hours before the abdomen was opened, the events were found to be essentially the same. Various injections were also made into the intestine above the ligature. When indifferent liquids were injected, these were moved upwards, sometimes as much as thirty centimetres, although only by the descending peristalsis and the rebounding contractions already described as occurring just above the ligature. Injections of a concentrated saline solution, however, produced distinct ascending antiperistaltic waves, precisely similar to those produced in the unligatured bowel by the same injection, and by them the liquid was quickly moved upwards.

The paralyzing effect of the distension of the bowel above the ligature, which quickly annihilates its movements, throws an instructive light on the well-known injurious effect of purgatives in cases of intestinal obstruction. As they increase the peristaltic contractions, they carry the contents of the intestine more rapidly to the neighborhood of the obstruction, and so more quickly bring about the paralysis which follows distension.

The results of these experiments are certainly opposed to the idea that fecal vomiting is the effect of any regular antiperistaltic contractions. These were only observed as the effect of the presence of irritant substances in the bowel, and the only condition in man in which this observation can fairly be applied is that in which irritating asperients, such as croton oil or colocynth, have been given. The simple diffusion of liquid contents causes their slow extension upwards, and a still greater effect is produced by the rebounding contractions, but the influence of both these was too light to allow them to be regarded as the cause of fecal vomiting. The conclusion of Nothnagel therefore is that this symptom results indirectly by the mechanism which Van Swieten rightly assumed. To some very instructive observations of Nothnagel on the movements of the intestines in other morbid states, we must return on another occasion.—*The Lancet*, October 14, 1882.—*American Journal* of the Medical Sciences.

TRIGEMINAL NEURALGIA.

Dr. Vandenabeele reports that in Dr. Rothery's practice at the Hôtel Dieu the treatment of this affection by ammoniacal sulphate of copper, as recommended by M. Féréol, has been found useful. M. Féréol employed it in obstinate neuralgias which had resisted numerous other measures, and presented all the characteristics of facial *tic douloureux*. In almost all cases the sulphate relieved the pain, sometimes instantaneously, and restored sleep to the patient, who had been deprived of it for weeks. The usual dose was from ten to fifteen centigrammes, which was increased to thirty or even fifty, according to the susceptibility of the patient. The only inconvenience produced by these large doses arose from disturbance of the digestive organs, which ceased as soon as the medicine was suspended. M. Féréol also prescribed ammoniacal sulphate of quinine, ordering from ten to fifteen centigrammes with thirty of syrup of orange-flowers, a hundred grammes of distilled water, and giving a tablespoonful at meal-times. The medicine should be continued for a fortnight, and its action is more decided in proportion to the amount of congestion that exists.—*Jour. de Thérap.* Oct. 25, 1882.—*The Practitioner.*

OBITUARY.

Dr. David Osborn Farrand, of Detroit, died at 5 A. M. Sunday, March 18, 1883. About two weeks before, he took a severe cold, but continued his professional work. On the Tuesday before his death, though suffering greatly with pain in his head, he visited those patients whose need was most urgent. On Tuesday night he was attacked with inflammation of the left ear. The tympanum ruptured and there was a profuse discharge, first of blood and later of pus. He was attended by Dr. Eugene Smith, who, on Saturday, pronounced his patient's condition critical and summoned counsel. There was effusion at the base of the brain and during Saturday night Dr. Farrand rapidly sank, and, as stated above, died Sunday morning.

Dr. Farrand was born in Ann Arbor, April 23, 1838. He graduated in the Literary Department of the University of Michigan, and also began his medical studies there. He then went to Europe and studied medicine in Germany. Returning to America, he graduated at the College of Physicians and Surgeons, in New York city, in 1863. Immediately after graduation he entered the army, and soon won an enviable reputation as a surgeon. In the army he was the comrade and fast friend of two of the editors of this journal, Drs. Octerlony and Maclean, a friendship which was unbroken until death. In 1866 he resigned his position in the army and located in Detroit. Here his untiring energy and marked skill, together with the noble traits of personal worth which he possessed, soon made him one of the best known and most beloved physicians of the the city. For the past ten years his practice has been very large and onerous. His work was not confined to any class; but he was the physician of the people. To the rich and the poor, to the virtuous and the vicious, he went with equal readiness, whenever his professional aid was sought. With him the love of his work was almost a mania. Although for years his practice was the largest in the city, his busy brain still sought other fields of labor. He was surgeon to Harper hospital, surgeon to the Detroit metropolitan police force fifteen years, chief surgeon to the Michigan Central railroad and chief medical examiner of the Michigan Mutual Life Insurance company. For six years he was a member of the Board of Education of Detroit, and to his efforts more than to any one else, was due the establishment of the City Board of Health, of which he was the first President. He was also engaged largely in manufacturing interests, and was at the time of his death, vice-President of Griffin Car Wheel company. He also, with the same earnestness and enthusiasm, which characterized all his labors, entered politics, not as a seeker for office, but for the benefit of his party. As chairman of the Republican County and Congressional Committees, he conducted several hard-fought campaigns.

In years his life was short, but in work it was long. In his life was exemplified the old adage, "He lives long who lives well." However, as before stated, the love of work was with him almost a mania, and had he worked more moderately, many years might have been added to his life of usefulness.

In everything that pertained to the advancement and honor of his profession, Dr. Farrand was deeply interested. To the University of Michigan he was always warmly attached, and to the faculty of the medical department, he gave words of advice and cheer in their endeavor to elevate the standard of medical education.

Probably the death of no other man could carry grief to so many as did the death of Dr. Farrand. The rich and the poor sought to do honor to the dead physician. The church, the yard and the streets for blocks overflowed with mourners.

A great and good physician, skillful of hand and kind of heart, has given his life to suffering humanity.

PARALDEHYDE—A NEW HYPNOTIC.

The actions of this drug were first studied by Dr. Cervello, of Palermo; and his experiments were made in the laboratory of Experimental Pharmacology at Strasburg, under the direction of Schmiedeberg. Professor Morselli, of the Royal Asylum of Turin, has, in conjunction with Dr. Bergesis, the assistant medical officer, made an extensive series of observations with it. Its chemical composition is $C_6H_{12}O_3$; and it is a polymeric form of aldehyde. In physiological action it strongly resembles chloral. A dose of three grammes procures quiet and refreshing sleep for from four to seven hours. It differs from chloral in its action on the circulatory system, strengthening the heart's action, while diminishing its frequency. It has also a well-marked action on the kidneys; greatly increasing the flow of urine. The skin is not at all affected. The drug does not give rise to digestive disturbances, to headache, or to any other unpleasant symptom. Up to the present, Professor Morselli has used paraldehyde about three hundred and fifty times. He has found it a valuable remedy in mania, melancholia, and other nervous affections, as well as in the sleeplessness that accompanies acute bronchial catarrh, lobar pneumonia and heart diseases. He believes that it will to a large extent take the place of chloral.—*British Medical Journal*, February 3, 1883.

MISCELLANEOUS ITEMS.

DEATH OF M. BERTILLON.—M. Bertillon, the Professor of Demography at the Paris École d'Anthropologie, and chief officer of the statistical bureau of the city, died recently, at the age of ninety-two.

COMPULSORY VACCINATION IN GERMANY.—Dr. Robert Koch has expressed himself strongly in favor of the present movement in Germany, which proposes compulsory vaccination. He thinks the dangers of transmitting syphilis and scrofula are almost infinitesimal.

AT the stated meeting of the Rensselaer County (New York) Medical Society, held on February 13th, the society voted to stand by the Code of the American Medical Association, and electd to the Association. The County society thus takes open issue with the State society.

DURING the epidemic of yellow fever which prevailed in Pensacola, Florida, and vicinity, in the summer and autumn of 1882, about two thousand four hundred cases of the disease, with nearly two hundred deaths, were recorded within the eighty-six days of the scourge.

TRANSFUSION OF BLOOD.—Dr. Thomas G. Morton, of Philadelphia, is desirous of securing the histories of all unpublished cases of transfusion of blood which have occurred in this country; and, on application, will be happy to furnish blanks for their registration.—*Medical News.*

INTRA-UTERINE STRANGULATION OF A FŒTUS BY ITS OWN UMBILICAL CORD.—In the *Centralblatt fur Gynakologie*, January 20, 1883, Dr. E. Fraenkel reports the case of a woman who was delivered of twins, one living, and the other dead and in a macerated condition, the death evidently having been produced by compression of the umbilical cord which was twisted five times tightly around its neck and separated from its placenta.

THE Chicago training school for nurses has issued its second annual report, showing a satisfactory progress. The school began in 1881, has now twenty-three admitted pupils, and eight on probation, employed in seven wards of the Cook County Hospital. The staff of the hospital expresses its full satisfaction with the conduct of the nurses. The institution is soon to have its own home in a building now in the course of erection in the vicinity of the hospital.

MYXŒDEMA.—M. Guerlain has observed a remarkable case of myxœdema, or pachydermatous cachexia, supervening on a wound of the neck. M. Verneuil points out that the nervous nature of this affection now appears to be clearly demonstrated; and that it is perfectly admissible that, in the case above referred to, as in many other diseases, the wound may have an influence on the central nervous system capable of bringing on special phenomena.—*British Medical Journal.*

A CASE OF EXTIRPATION OF THE LARYNX.—Dr. Karl Maydl reports a successful case of extirpation of the larynx, performed in Professor Albert's clinic, in Vienna, on a man, aged fifty years, for an extensive carcinomatous tumor of the larynx which interfered with respiration and deglutition. Tracheotomy was first performed, and Treudelenburg's canula introduced and allowed to remained for three days. Recovery rapidly occurred and an artificial larynx was inserted.—*Wiener Med. Presse.*

THE ACID OF THE GASTRIC JUICE.—Dr. V. Poulet has made a large number of experiments on the gastric juice of different species of animals subjected to dialysis, and claims that the principal acid of this fluid is neither lactic nor hydrochloric acid, but hippuric acid in the form of acid hippurate of potassium, combined with neutral phosphates of lime and sodium. The author bases this opinion on the microscopic appearance of the crystals and on the fact that when gastric juice is subjected to dialysis, evaporated at 120°C. to a syrupy consistence, and then treated with an excess of caustic potash or quicklime, the characteristic odor of benzine may be recognized on dry distillation.—*Journ. de Med. de Paris.*

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ORIGINAL ARTICLES.

A LECTURE ON THE PHYSIOLOGICAL ACTION AND THERAPEUTICAL USES OF HYOSCYAMUS.

BY VICTOR C. VAUGHAN, M. D.

In the majority of our text-books upon therapeutics, it is stated that hyoscyamia and atropia are identical, and but little space is devoted to a consideration of the uses of the former. It is probable that the alkaloids agree in ultimate chemical composition; but they are only isomeric, not identical. Ladenburg has shown that hyoscyamia may easilly be converted into atropia, and that the two yield the same derivatives. But isomeric substances may differ greatly in their effects upon animals, and that this is true in the case now under discussion, there can be no doubt. The sedative effects of hyoscyamia are much more marked than those of atropia. The former acts more powerfully upon the brain: the latter upon the spinal cord. In some of the lower animals, as rabbits and birds, hyoscyamia is fatal in much smaller doses than atropia is. For instance, although a pigeon will recover from three grains of atropia, it will die from the effects of one-half a grain of hyoscyamia. In man, this seems reversed, for, while the maximum dose of atropia for hypodermic use may be placed at one-fortieth of a grain, many practitioners administer hypodermically from one-sixteenth to one-fourth grain of hyoscyamia. However, it should be stated that preparations of hyoscyamia differ greatly in strength, and the hypodermic injection of one-fortieth of a grain, in a person addicted to the use of morphine, produced alarming results.

Merck, of Darmstadt, now prepares the alkaloid in two forms, the white, granular, (called crystalline), and the dark, extractive alkaloid.

The white preparation is more powerful than the dark one, and should, therefore, be used in smaller doses. Dr. Gray gives the dose of the former, as one-half that of the latter. The cost of the white preparation is much greater than that of the dark one. Both are readily soluble. For these reasons the dark preparation is most generally used.

Gnauck holds that hyoscyamia is a compound body, consisting of hyoscine and tropaic acid. From experiments, he concludes that hyoscine is ten times as powerful as hyoscyamia, the one-sixth hundredth of a grain producing well-marked effects.

Prideaux recommends a convenient formula for preparing and keeping the alkaloid for hypodermic medication. It consists of one grain of Merck's extractive alkaloid in twenty-four minims (alcohol, eight minims; spirit of sulphuric ether, six mimims; water, ten minims). This solution will keep indefinitely, and it may be used hypodermically with or without dilution, according to the dose which it is desirable to use. However, if given by mouth, it should be largely diluted; for instance, as Prideaux recommends: put the twenty-four minim solution in an eight ounce bottle, add two ounces of syrup of orange and fill the bottle with water.

PHYSIOLOGICAL ACTION.

On the Brain.—Considerable doses (one twenty-fourth of a grain or more) produce well-marked cerebral effects. The face is flushed; the pupils dilated, and the gait staggering. There is a sensation of fullness in the head, and this is often accompanied with low, muttering delirium. Later, drowsiness comes on and a sleep of several hours duration follows. This sleep is often broken by fitful starts or low mumbling of voice. Evidently the sleep is not a dreamless one; but the sleeper wakes with a clearer brain. Whether the sleep is due to some special effect of the alkaloid upon the cerebral tissue, or is simply the result of the changes produced in the circulation and the amount of blood in the brain, we cannot decide.

On the Circulation.—Small doses of hyoscyamia (one-fortieth of a grain) reduces the rate of pulsation. Especially is this the case when, at the time of administration, there was abnormal excitement of the pulse. The reduction may be as great as twenty-five or thirty per minute, and Schroff states that he has observed the pulse to fall from seventy-nine to eighteen; but othèr observers have never found the pulse to fall below forty, from the effect of this drug. On the other hand, a larger dose (from one twenty-fourth of a grain upward) causes, either immediately or after a few minutes, a marked increase in the rate of pulsation. Sometimes there is a period of a few minutes after the hypoderic injection, in which there is diminished pulse rate, followed by an increase. In other instances, the pulse is increased immediately. After the pulsations have continued at a rate above normal for from one-half hour to eight or ten hours there is a gradual decline, the fall soon going below the normal rate. Arterial tension varies, in the same way as, and simultaneously with the pulse.

As to the manner in which these changes in the action of the heart are produced, Shaw has made some satisfactory and interesting experiments. He finds that section of the vagi does not prevent either the rise of the pulse rate or its subsequent fall, also that irritations of the vagi reduce the pulse rate, but the reduction is small compared with that which normally takes place, so that it is inferred that hyoscyamia partially paralyzes the inhibitory fibres of the vagus. Therefore, Shaw ascribes the increase in pulse rate to this partial paralysis of the inhibitory fibres of the vagi. However, it is more than probable that (as was taught by Harley), both hyoscyamia and belladonna have a markedly stimulating effect upon the sympathetic nervous system, and this may account for all the effects of this drug upon the heart. This may also explain why irritation of the vagi, while the animal is under the influence of the drug, is followed by so slight a response. That both belladonna and hyoscyamus are stimulants to some of the sympathetic nerves is proved by their mydriatic effects.

Shaw states that the rise in arterial tension is due to stimulation of the vaso-motor center and that in frogs, the rise is trifling after section of the medulla between the atlas and occiput. The fall, he ascribes to partial paralysis of the vaso-motor center, and, probably to some effect upon the heart itself.

It is the experience of Lawson, confirmed, I think, by most who have observed the effects of the drug, that the delirious excitement and interrupted sleep occur during the period of pulse acceleration, and that the fall in the pulse precedes and indicates complete recovery from the operation of the alkaloid.

On the Spinal Cord and Nerve Conductors.—Hyoscyamia in small doses lessens reflex excitability; while larger doses first diminish and subsequently increase it. How much of this is due to the corresponding effects upon the organs of circulation we cannot say. If taken in dangerous quantities, this alkaloid destroys the power of motion, from its paralyzing effects upon the motor nerves. It is not known to affect the sensory nerves, and it is without effect upon muscular tissue.

Respiration and Temperature.—The effect of the drug upon respiration and temperature is not very marked, but tends to reduce both. Lawson found, however, that long continued use of the drug had an opposite effect and quickened respiration, and raised the temperature.

Digestive Organs.—In from five to fifteen minutes after the injection of one-thirtieth of a grain or more of the alkaloid, the mucous membrane of the mouth and pharynx becomes dry and rough. As the effects of the drug pass off, these parts become covered with a thick, sticky, offensive, acid secretion, which continues to be poured out for some time. Obstinate and severe vomiting sometimes results from the prolonged use of hyoscyamia. Lawson observed one case of hæmatemesis. For these reasons, it is better to administer the drug with food to persons with weak digestive organs.

On the Excretions.—From the fact that hyoscyamia accelerates the pulse and, at the same time, increases arterial tension, it will be seen that it is a diuretic. The exact extent to which it will act as a diuretic depends upon the degree to which the circulation is altered. Hyoscyamia checks the excretion of the skin, but its effects are not so marked here as are those of atropia.

Organs of Special Sense.—The mydriatic effects of atropia and hyoscyamia are probably equal, but as the former in a pure state is so much more easily obtained, the latter is seldom used for its effect upon the pupil.

THERAPEUTICAL USES.

In Insanity.—This drug has given more satisfaction than any other in the treatment of certain forms of insanity. Within the last ten years it has been extensively tried, and the reports from different sources agree quite closely. The drug has proved itself of great value in acute mania and in the sudden and violent outbursts which occur in other forms of insanity. Dr. Gray divides the cases of mania in which hyoscyamia has proved of value into the following classes: (1) those who are noisy, raving, incoherent, destructive to clothing and opposed to necessary care; (2) those who have occasional periods of maniacal excitement; (3) those who are uneasy, talkative, restless and sleepless.

He states that it has also been found to be of value in the following classes of melancholia: (1) those who have periods of frenzy, sometimes endangering life; (2) those who persistently and determinately resist care and food under delusion; (3) those who would wear themselves out from restlessness and constant motion.

He further states that the drug is beneficial in the care of paretics who have maniacal attacks and resist care.

In cases of depression bordering on melancholia, and in cases of high nervous excitement with muscular restlessness, Dr. Gray prescribes the following combination:

℞. Extracti nucis vomicæ,	
Morphiæ bromidi..................................	āā grs. viij.
Piperinæ..	grs. x.
Hyoscyamiæ..	grs. iij.

M. Et. Ft. Pilulæ triginti (30). S. One twice a day, and reduce to one at night.

Prideaux makes the following summary of the results obtained by the use of hyoscyamia:

(1) "That in most cases of mania, or where there exists great excitement of an aggressive and destructive character or rapidity of movement and speech, the use of the drug is the most effectual and rapid means of exercising that form of restraint which has been termed 'chemical restraint.'"

(2) "That in cases of acute mania it will produce sleep when all other drugs have failed, and is one of the most rapid and reliable narcotics we possess."

(3) "That in the treatment of the epileptic status in epileptic mania, it diminishes the number, frequency and severity of the attacks, especially if its administration be extended over some time."

(4) "That in delusional insanity, especially the mania of suspicion and other forms of mania where the delusions are varying and changeable, it has a decided action in producing such an altered condition of the cerebral status that a condition which has been termed physiological mania results, and this so eclipses the former delusions and hallucinations that they are forgotten and the mind becomes clear, while if the subjection to the influence of the drug be continued, it ultimately leads, under favorable circumstances, to a permanent condition of quiescence and restoration to a healthy state of mind."

(5) "That in chronic dementia, associated with destructive tendencies, bad habits, and sleeplessness, the condition of the patient much improves after a continued course of small doses of the drug."

Hurd has observed in several cases of periodic insanity, that the administration of a moderate dose of hyoscyamia, on the eve of an outbreak, has been sufficient to arrest it. He also states that in one instance, one-twentieth of a grain of the drug at a dose arrested the disease for many months. In this case the drug produced profound intoxication which lasted several hours, and was followed by a deep sleep from which the patient awoke with a clear mind.

Reinhard states that hyoscyamia acts very favorably in states of excitement occurring synchronously with the catamenia. He also finds that it diminishes the number and intensity of the seizures in epilepsy. The same writer thinks that the drug is especially indicated when the pulse is contracted and tense, and that its contraindications are diseases of the heart and lungs. Its too prolonged use may cause paralysis of the heart.

In Paralysis Agitans.—Oulmont has given great praise to hyoscyamia in the treatment of mercurial tremor, senile tremor, locomotor ataxia and paralysis agitans. But the observations of others have not borne out these claims. However, recently, Mann has reported the cure of a most unpromising case of paralysis agitans, this drug being an important element in the treatment. He placed the patient substantially upon a milk diet and gave drachm doses, three times a day, of sodium bromide and tincture of hyoscyamus. He also used electricity in the form of central galvanization and in a bi-temporal current. It is impossible to say, in this case, to what the marked improvement was due.

In Nervous Insomnia.—Hyoscyamia is undoubtedly a valuable adjunct to other remedies in the treatment of insomnia due to nervous excitement. For this purpose it may be combined with chloral, bromide, etc. For insomnia, Farquharson gives the following formulæ:

℞.	Extracti belladonæ	gr. iij.
	Camphoræ	gr. xij.
	Extracti hyoscyami	gr. xv.

M. Fiant pilulæ sex (6). One at bed time.

℞.	Tincturæ hyoscyami	♏ xxx.
	Potassii bicarbonatis	gr. x.
	Syrupi Papaveris (Br)	fʒij.
	Aquæ camphoræ	q. s. ad f℥jss.

M. S. To be taken at bed time.

We have frequently used the following in nervous insomnia with most pleasant results:

℞.	Extracti hyoscyami fluidi	fʒvj.
	Potassii bromidi	ʒv.
	Syrupi Simplicis	f℥ij.
	Aquæ	q. s. ad f℥iv.

M. S. One teaspoonful at bed time, to be repeated within one hour if necessary.

Chloral may be added to this in severe forms of insomnia. The hyoscyamia seems to deepen the quieting effects of the bromide and chloral.

In Diseases of the Bladder.—In irritation of the bladder, accompanied by considerable nervousness, as it often is, hyoscyamus proves of great value. It may be given with infusion of buchu and some alkaline carbonate. For instance, have the patient drink, during the day, one pint of the infusion of buchu to which have been added from thirty to sixty grains of the bicarbonate of soda and from twenty to forty drops of the fluid extract of hyoscyamus. This use of the drug is one of the oldest in which it has been tried, and it still maintains its popularity. It is most likely that in these cases the benefit arises wholly from the action of the drug upon the nervous system.

In Diseases of the Lungs.—Hyoscyamus may, sometimes with advantage, be substituted for morphia in cough mixtures, as in the following:

℞. Ext. hyoscyami fluidi ♏ xxx.
Ammonii chloridi ʒj.
Syrupi Tolutani f℥iv.
M. S. One teaspoonful every hour.

Or:

℞. Extracti hyoscyami fluidi fʒj.
Vini ipecacuannhæ fʒij.
Syrupi glycerrhizæ f℥ij.
Aquæ carui q. s. ad f℥vj.
M. S. One tablespoonful three or four times per day.

LITERATURE.

Bartholow. Materia Medica and Therapeutics, New York, 1880.

Bucknill & Tuke. Manual of Psychological Medicine, London, 1873.

Campbell. Journal of Mental Science, 1871.

Farquharson. Therapeutics and Materia Medica, 1882.

Fronmuller. Klinische Studien über die Schlafmachende Wirkung der narkotischen Arzneimittel, Erlangen, 1875.

Gray. Hyoscyamia in Insanity, *American Journal of Insanity*, Volume XXXVI.

Gnauck. *Centralblatt f. d. med. Wissenschaft.*

Hurd. The treatment of periodic insanity, *American Journal of Insanity*, 1882.

Husemann. Handbuch der gesammten Arzneimittelehre.

Illing & Edlefsen. Ueber die therapeutische Verwendung des Hyoscinum Hydrochloricum und hydrojodicum, *Vorl. Mitt. Centralbl. f. d. Med. Wissensch*, 1882.

Leared. Hypodermic Injection of Hyoscyamia, *London Lancet*, 1, 1879.

Laurent. De l'Hyoscyamine et de la Daturine.

Lawson. *West Riding Reports.*

Mann. A case of paralysis agitans cured by central galvanization, sodium bromide and hyoscyamus, *Journal of Nervous and Mental Diseases*, Volume VI.

Mendel. Die therapeutische Anwendung des Hyoscyamin bei Psychosen, *Allg Ztschr. f. Psychiat*, 1879.

Oulmont. De l'Hyoscyamine et de son action dans les Névroses, *Bulletin Général de Therapeutique*, Volume LXXXIII.

Prideaux. *London Lancet*, 11—1879.

Reinhard. *Archiv. f. Pschy, und Nervenkr*, Band XII.

Rodzevich. *Vratch*, 1879.

Shaw. *Journal Nervous and Mental Diseases*, Volume VII.

Savage. *Journal Mental Diseases*, 1879.

Seguin. *Archives of Medicine*, 1882.

Trosseaux & Pidoux. Therapeutics and Materia Medica, (translation).

EDITORIAL BRIEFS.

A few of our subscribers have not yet remitted their subscription for the present year. Our subscription price is two dollars per year PAYABLE IN ADVANCE. It requires money to publish a medical journal, and we sincerely hope that all delinquent subscribers will sufficiently appreciate this fact to prompt them to remit the amount of their arrearage at an early date. The amount is very small in each case, but the aggregate would greatly assist in making a first-class journal.

A Curiosity.—The following is an old bill for medical attendance upon a pauper:

Chester County to Dr. Bronson VanLeers, Dr.

1769.	£.	s.	d.
January 25—Bleeding Ann Gregory	0	2	6
January 25—A vomit	0	1	6
January 26—Pleuritic drops	0	4	6
January 26—Six pectoral powders	0	3	0
January 26—A cordial julep	0	4	6
January 27—Ditto	0	4	6
January 27—Six pectoral powders	0	3	0
January 27—A pectoral linctus	0	3	0
January 27—Pleuritic drops	0	4	2
January 28—Six pectoral powders	0	3	0
January 28—Two blistering plaisters	0	5	0
January 28—Plaister	0	1	6
January 29—Six pleuritic drops	0	3	0
January 27—A purging bolus	0	1	6
January 29—A cordial julep	0	4	6
January 30—Purging ingredients	0	2	0
January 30—Plaister	0	1	6
January 30—Six pectoral powders	0	3	0
January 31—A cordial julep	0	4	6
February 1—Six pectoral powders	0	3	0
February 1—Pleuritic drops	0	4	0
February 1—A pectoral linctus	0	3	0
February 1—A cordial julep	0	3	0
February 2—Six pectoral powders	0	3	0
February 2—A cordial julep	0	3	0
February 4—A febrifuge julep	0	4	6
February 4—A pectoral linctus	0	3	0
February 4—Plaisters	0	1	6
February 5—Purging bolus	0	1	6
February 5—A pectoral linctus	0	3	0
February 8—Ditto	0	3	0
February 8—A cordial julep	0	4	6
February 10—A pectoral linctus	0	3	0
	45	8	6

And here the narrative terminates, without giving us any information whether the said Ann recovered her wonted strength, or died for want of sufficiently powerful and numerous purging boluses, pectoral linctuses, juleps—cordial and febrifuge, plaisters, purging ingredients, or pleuritic drops. Remembering that we have a memoranda covering only fifteen days, would the treatment *now* be considered *active*, or *expectant?* If paupers were treated as was Ann (for whom the county paid the bill), how were patients able to pay their own bills probably treated? More activelv? Perhaps the good doctor was *proving* the materia medica of his time? G. G. G.

DR. VAN BUREN.—W. H. Van Buren, M. D., LL. D., died at his home in New York City, March 25, in his sixty-fourth year. He was born in Philadelphia, entered Yale with the class of 1838, but on account of some student boisterousness, was expelled in his junior year. However, Yale recognized his worth by conferring on him in 1866, A. M., and in 1878, LL. D. He studied medicine in Philadelphia and Paris, graduating from the University of Pennsylvania in 1840. Dr. Van Buren was well-known as a professor and author. Personally, he was a refined gentleman and a polished scholar, and professionally, he was an interesting lecturer, clear writer, and skillful operator.

A VICTORY FOR COMMON DECENCY.—Last summer the Detroit *Evening News* published a sensational story which first appeared in a local paper of some Canadian town. The story was to the effect that Mrs. Joseph P. Wardle, of Tilsonburg, Ontario, who had been sent in 1882 as a patient to the Hospital of the University of Michigan, and her attending surgeon in the hospital had been criminally intimate. As Dr. Maclean had been Mrs. Wardle's attendant, the charge fell upon him. In company with the late Dr. Farrand, Dr. Maclean called upon the editor and proprietor of the *News*, Mr. Scripps, and complained of such charges being made against him without the editors having investigated as to their truth or falsity. Mr. Scripps replied in substance that he did not care for Dr. Maclean's feelings, the public desired such sensational stories, and he would publish them. Dr. Maclean then instituted suit against the editor for libel. After this, the *News* continued its dirty attacks and made specific charges of the time and place of adultry. A few weeks ago the case was called in the superior court of Detroit before Judge Chipman. During the trial it was shown that Mrs. Wardle, during the first part of her stay in the hospital, occupied a bed in the general ward. Later, on account of her critical condition, she was transferred to a private room, which she occupied with another lady patient. When Mrs. Wardle had improved so as to go out, Dr. Maclean ordered his carriage one day, and, as he frequently does with his patients, both male and female, drove Mrs. Wardle around the campus. The defense endeavored to make a big thing out of this on the trial. A few days after this drive, Dr. Maclean was taken sick and did not see Mrs. Wardle again until she came to see him for medical advice in June, 1882, more than a year after she had left the hospital. During this year, some correspondence with reference to Mrs. Wardle's disease had passed between herself and Dr. Maclean. In June last, Mrs. Wardle was in Dr. Maclean's office once, and that only for a few moments. The *News*, although it had made specific charges of adultery, did not on the trial pretend to offer any evidence to prove such charges. It depended wholly upon a letter, signed John Welcorn, whose envelope was postmarked, Kingston, Ontario, July 24, 1882. Dr. Maclean was at Kingston, his old home, at that time. The envelope was addressed to C. D. Brenton, Tilsonburg, Ontario. This letter was given to Mr. Wardle, the postal clerk telling him that Mrs. Wardle called for letters of that address. *After two days*, Mr. Wardle showed a letter to his wife addressed to C. D. Brenton, accused her of infidelity and drove her from home. The letter referred to sexual intercourse between the writer and person addressed. This letter resembled Dr. Maclean's handwriting somewhat, and upon it, the *News* relied. Hired experts swore that the handwriting was Dr. Maclean's, but every one who was acquainted with the Doctor's handwriting swore that the letter was not his, and some of them pointed out the differences, which were plainly enough seen. The prosecution proved that there had been no possibility of criminal intimacy at any time between the two, and, as before stated, the defense did not attempt to prove such an act, only as implicated in the letter. To many the letter bore marked evidences of being a forgery. The letters were made with great care and there were unmistakable signs of changes having been made. Mr. Wardle, who was of an insane family, had long been insanely jealous of his wife, had mistreated her and was heard to say after he had driven her from home that he had been working for that for years.

The whole trial hinged upon the Brenton letter and the question of malice in the *News* in making the publication. On this the case went to the jury and a verdict of $20,000 damages for Dr. Maclean was awarded. The verdict has given cause for great rejoicing both in Detroit and Ann Arbor, and indeed all over the state and Ontario. Mrs. Wardle has a similar suit pending against the *News*.

This is a just rebuke to that class of newspaprs which rely upon sensational stories and publish them without any reference to their truth or falsity. The verdict is an index of the moral feeling which has been aroused against this license of the press.

CHANGES AND VARIETIES IN MEDICAL OPINIONS AND PRACTICE.—In our progressive profession—in a science and art by no means perfect—sharing in the present imperfection of all sciences and arts—it is both interesting and profitable to occasionally refer to the changes which have occurred from a variety of influences in the views and practices which have prevailed, and to point out the reasons for differences still existing.

Not to go farther back than the experience and memory of the older members of the profession, changes of a very important character have taken place in medical opinions and practice.

Some of these changes are dependent upon scientific discoveries, and upon different modes of scientific thought, some on differences of speculative theories, and some on mere fashion and fancy. Every one fairly abreast with the present state of the profession, is familiar with the scientific facts which have been added to medicine and surgery within the last forty or fifty years, and they need not all be enumerated. The discoveries in physics, chemistry, and general biology, in human physiology, including those of minute structure revealed by the microscope, have been followed by an equal advance in pathological science, and by marked, though by a less, advancement in therapeutical knowledge.

In therapeutics there are more uncertainties arising from the greater number of varying and unknown factors in such problems, and in this, the most important part of the profession—the *art* of healing—there have been the greatest changes of opinions and procedure. In consequence of the fact that so many diseases are self-limited—will disappear of themselves without treatment, or even under bad treatment, while others of the same species, will terminate only in the death of the patient, under the best management, the ultimate converting effects of therapeutic agents are often exceedingly uncertain, and the sources of fallacy in conclusions respecting them are numerous. It is not then strange that wide differences of opinions on therapeutical questions and corresponding differences in practice exist. These differences are liable to be produced by a great variety of causes, and changes are likely to occur from changes in these causes.

Within the last few decades, many discoveries have been made in physiology and pathology, which have greatly influenced, and much improved therapeutical practice. Advancement in chemical and botanical science has brought to our knowledge a large number of new remedies, some of which have proved of great efficiency and value, and the great advancements in pharmacy have placed these and the older agents in eligible and convenient forms before us. More exact and extended observations of the physiological and therapeutic actions of remedies have worked changes in opinions. All these conditions have very naturally and properly had an effect in changing modes of practice.

Some new diseases have been developed, or at least discovered, which have led to new modes of treatment, and old diseases from the changes in our civilization and habits, in our hereditary tendencies which have been accumulating; from changes in cosmical and climatic conditions and influences, have also called for changes in treatment.

But there are other causes which have effected changes, some of which are less legitimate. Changes as the result of different theoretical views have changed the modes of practice sometimes for the better, but not always so. There is a wide difference between clearly observed and well established facts, and speculative theories, between simple indications from positive facts, and doubtful conclusions from uncertain premises. Speculations have varied at different times by different prevailing casts of thought, by the varying influence of those writers regarded as authorities, and by the prejudices of sects and parties, which are ever rising and declining. The prejudices excited in the minds of the laity, often for sinister purposes, react upon the profession, causing in many, changes in practice if not in opinions.

Another reason for, or explanation of marked changes, is that one extreme is apt to be followed by another, its opposite. The pendulum raised from its perpendicular, swings as far in the opposite direction, and time is required to bring it to its equilibrium.

But changes in medical practice, as in other practices, social, economical and political, from love of novelty, changes of costume and fashion, not based upon natural or appreciable causes, also take place.

Taking into account all these considerations, we cannot be surprised at the changes which in time have occurred in medical practice, or at the differences which at the present time exist between different members of the regular profession. The differences among the different medical sects, even on the assumption that all are honest in their convictions and sincere in their pretentions, can also be readily accounted for. When to this are added the motives for deception, for creating popular prejudices and pandering to them, the motives for supplying every public demand, reasonable or unreasonable, for the injury, as well as for the benefit of the people, the varieties of practice good and bad, are always explicable. The changes which have occurred in the practice of blood-letting will serve as an example, illustrative of some of the foregoing statements. Bleeding fifty years ago was employed with little discrimination in a great variety of diseases, and especially in those where inflammation was present. In pneumonia, for instance, the question was not as to whether bleeding should be practiced, but as to the extent to which it should be carried. The particular condition of the patient or even the stage of the disease was not so much considered; but the simple fact of the inflammation of the lungs, was thought to demand the lancet.

Advancement of knowledge as to the pathology of inflammation in general, and especially as to the pathology of inflammation of the lungs, called a halt in the use of this remedy, and careful observation particularly in hospital practice, when the disease was generally met with in enfeebled subjects, and in the advanced stages, proved its injurious effects when indiscriminately resorted to. This showing demanded a change, and the change was followed by better results. It was found that expectancy—the abandonment of all active measures—was followed by better results in the hospitals than the indiscriminate bleeding and the use of mercury and antimony; and this demonstration, with many, caused confidence to be lost in all remedies in the disease.

What occurred respecting pneumonia took place also with other acute diseases, and a period of medical skepticism and negation, originating with the physicians of large hospitals in the European cities, Vienna, Berlin, Paris, Edinburgh, and London, were propagated from their centers through this country, and affected more or less the masses of physicians throughout the world.

With some, as in the case of Dr. Todd, of London, when the lancet and other means of depressing treatment were abandoned, what was called the "Stimulating" treatment was adopted, and alcohol was resorted to on very frequent occasions. This method found imitators in this country and elsewhere, and the reign of alcohol in acute disease had its subjects and its time. Although that reign is rapidly diminishing, it is not entirely past. Indeed the remedy has a legitimate place in therapeutics, and there will continue to be cases where its judicious administration as a reliever of shock and a modifier of some morbid processes will continue.

The introduction of new remedies and the different applications of old ones, together with more careful observation of their effects, have further modified treatment, and we are just now recovering medical skepticism, from expectancy and from excessive "Stimulation." We are restoring the lancet not to its former position, but to a safer and more rational one, and are recovering from the fond delusion that all diseases are evidences of deficient action, and that alcohol is a simple supporter of strength, or creator of force, and therefore applicable to all acute diseases.

There is a source of error and a danger to American physicians still remaining to which attention should be called. Our country is very liberally supplied, not to say inundated, with translations and republications of foreign works on every subject of medical science and practice. In the absence of international copyright laws, there is nothing to prevent a publisher from reproducing such works, often printed upon cheap paper, and put up in corresponding binding, and afforded at such prices as to tempt purchasers, and make them feel that original American works, gotten up in good mechanical style, and sold at such prices as will afford a small compensation to the authors, are dear. The result is, that American works produced by authors familiar with the ordinary forms of diseases in this country, among our general population, are to a large extent crowded out of the market; and the place they should occupy is taken by the foreign works, written from the standpoint of the London, Paris, Vienna and Berlin physicians, whose practice is almost exclusively in large metropolitan hospitals and consultation in metropolitan practice, where acute diseases are seen only in their severe forms and in advanced stages. The conditions of the patients they see are so entirely different in many respects from those coming under the care of the American general practitioner, that the conclusions respecting the efficiency of remedies drawn from experience and observation among the one class of cases, are not entirely applicable to the other.

Every one who has carefully observed diseases in the general community in this country and in the cities of Europe must have been impressed with this fact.

Dr. Brown Sequard who has had such extensive observation on both sides of the Atlantic, is very positive in the expression of his convictions as to the great differences in the peculiarities of patients and the types of diseases in the two hemispheres, and of the importance of modifications of treatment. He is even severe in his criticism upon the practice of his countrymen especially in the diseases of Americans.

It is true that facts and principles of physics and chemistry, and the leading facts of biology, healthy and morbid, are the same everywhere; but every practitioner knows there are peculiarities of disease belonging to climate, locality, and race, and individuals, dependent upon the peculiarities of constitution and various habits of life, which must be taken into account and which should modify the treatment.

The authors of all our translations and reprints of practical works from abroad, have had experience chiefly, if not entirely, in hospitals and in consultation practice, and are certainly ignorant of the peculiarities of medical diseases in our wide extended country. This cannot be compensated for by the increased number of cases which a hospital and metropolitan physician is able to see. Indeed the profounded investigations of science are sometimes better pursued in the country. Pasteur's investigations were prosecuted in the country and Koch was originally a country practitioner. In pratical medicine a limited number of cases carefully observed and pondered upon, are better for just conclusions than a larger number hastily seen and rapidly dismissed.

All these remarks more particularly apply to *medical* diseases which are the ordinary staple of the general practitioner. The mechanical principles of surgery and obstetrics are not affected by locality or peculiarities of patients; and the physiological action of medicines, and the general principles of therapeutics are the same everywhere. There is therefore much in common in all medical as well as in surgical and obstetrical experience; but the particular management of all cases should be influenced by constitutions, habits and surroundings. Particularly the efficacy of remedies, and the results of particular modes of treatment are greatly influenced by the personal and local conditions of patients.

We desire not to exaggerate the importance of this view, or to be misunderstood respecting it. We fully appreciate labors and investigations in pathology and therapeutics of our foreign confreres and should avail ourselves of this results. But we think that conclusions drawn from experience in European metropolitan hospitals should be accepted with much caution and reserve as applicable in our American family practice. We are confident that the poor, starved alcoholised, often syphilitic, or otherwise degraded inmates of such hospitals, or the attendants upon the foreign polyclinics are in a condition so different from the great body of our people that therapeutical conclusions from the one class are not applicable in all respects to the other.

For example, we do not think that because these poor foreign patients do not appear to bear well depleting and eliminative treatment, but do seem to demand, or at least bear, when they are ill, their accustomed alcohol, that therefore our well nourished and abstemious patients, should be generally subjected to what is called "Stimulating" or "Supporting" treatment.

We do not think because a London physician and author finds that he does not arrest by treatment the course of internal inflammations as he sees them in their advanced stages, that therefore we should not attempt to cut short inflammatory processes by early abortive measures.

Is there not danger in the almost exclusive study of practical works written by men, however able and learned, with such experience as foreign metropolitan physicians necessarily have, that opinions will be formed not the most broad and catholic, and words of practice established not the best adapted to our country patients? Are not some of our American authors unduly influenced in their opinions and teachings by foreign authorities on practical subjects? Should we not cultivate American independence to a certain reasonable extent in medicine as well as in the useful arts, in general literature and in government?

These questions are certainly proper to be asked, and to be calmly considered. A. B. P.

CORRESPONDENCE.

MICHIGAN STATE BOARD OF HEALTH.

Reported for THE PHYSICIAN AND SURGEON.

The Michigan State Board of Health met at its office in Lansing, Michigan, on April 11, 1883, the following members being present: Honorable John Avery, M. D., of Greenville; Arthur Hazlewood, M. D., of Grand Rapids; Honorable C. V. Tyler, M. D., of Bay City; Henry B. Baker, M. D., Secretary. Dr. Avery was made president *pro tem.* The minutes of the last two meetings of the Board were read and approved. The secretary read a quarterly report of work in the office of the Board, showing the amount of proof read, meteorological and other reports received, compilation of material affected, bulletins, documents, circulars, blanks and reports distributed, correspondence performed, etc., being a brief summary of the work performed in the office of the Board. The secretary also presented a resumè of the work preformed by other State Boards of Health, and a review of sanitary legislation in other states. He stated that in Michigan the House of Representatives had passed a bill which was likely to become a law, practically repealing that section of the act establishing the State Board of Health which provides that the Secretary of the State Board of Health shall be the superintendent of vital statistics. If the bill becomes a law, the vital statistics will hereafter be entirely under the control of the Secretary of State. The secretary referred to the alarming presence of smallpox in Nashville and New Orleans, and suggested that Michigan was in danger because of the approaching time when Southern people flock to the numerous summer resorts in Northern Michigan. The secretary was instructed to correspond with the National and other Boards of Health, and do all that can be done to prevent the introduction of smallpox, by quarantine and inter-state inspection. The secretary was authorized to send to health officers in the vicinity of health and summer resorts information of the existence of smallpox in places whence some of their visitors come, also to send the same notice to health officers of cities especially exposed to introduction of the disease.

The secretary presented an account of sickness caused by eating salted pork. The sickness was attended by burning in the stomach and abdominal tenderness. Some of the meat was fed to four cats. The symptoms in the cats were, expansion of the pupils, vomiting, great thirst and tenderness of the muscles. Diarrhœa was not present. Three of the cats died, the fourth one being barely able to walk after one month.

They were attacked twelve hours after eating the meat. A partial microscopical examination of some of the meat by Professor T. J. Burrill, of Champaign, Illinois, disclosed nothing within the meat to have caused the illness, but on the surface of the "lean" portions there was found a *microccocus* enormously numerous, as well as some fungous developments of a mould-like kind sparsely present. The *micrococcus* was of a new variety, entirely distinct from that of "hog cholera," which latter was not detected in the specimen. It is not known whether the organism was on the pork when it was used for food, and it has not yet been determined whether it is now alive. Culture experiments will be instituted to determine that point. It is quite devoid of motion and has a less dense or firm appearance than most of its congeners. It takes the ordinary aniline violet stain. Usually two are connected in a figure 8 form, rarely more. The secretary presented statements from Mr. Love, clerk of the board of health of Grand Rapids, showing successful prosecution for selling diseased meat in several cases.

In the afternoon session, Professor R. C. Kedzie, formerly a member of the State Board of Health, made a report of his attendance at the meeting of the Sanitary Council of the Mississippi Valley, at Jackson, Mississippi, April 3, 1883, at which he represented the Board. He reported that the meeting was unanimous in urging the continuance of the National Board of Health, and the system of river and railroad inspections to insure the prevention of the spread of epidemic diseases, without the obstruction of travel and commercial relations between the States, and of such survelliance of the port of New Orleans as will give to the several States and important municipal health authorities represented in the Council, prompt and reliable information of the occurrence and progress of an epidemic disease in that city. Plans for such work were discussed and adopted; and it was understood that in case of the failure of the National government to carry it on after June 2, beyond which time the National Board of Health will be unable to sustain it unless President Arthur places the $100,000 appropriation at its disposal, it will become important and necessary for the several States endangered to supply, in some way, the money to carry on the work. Delegates from Mississippi, Arkansas and other States, pledged certain amounts, in case it proves to be necessary. (Michigan has never made an appropriation available for use in preventing the *introduction* of epidemic diseases). Dr. Kedzie received a vote of thanks for the able manner in which he represented the Board at the meeting.

This being the annual meeting of the Board, the election of a president for the ensuing two years resulted in the election of Honorable John Avery, M. D., of Greenville.

The secretary presented an account of a death of a railway employe by being caught in a "frog," together with a copy of a bill now before the legislature providing for a wedge of hard wood or other substance of equal utility, in all "frogs" of an angle of less than forty-five degrees. He described the method devised by a prominent railroad man, of tamping hard coal cinders in the frog. This method is not dangerous to the traveling public, and the wedge of hard wood by its liability to be misplaced, might throw a train from the track and cause many deaths.

The secretary was authorized to prepare a blank form for the use of health authorities in Michigan in reporting the occurrence of a disease dangerous to the public health, to the Secretary of the State Board of Health.

Invitations to hold sanitary conventions at Muskegon and Ionia were accepted, the dates to be hereafter decided upon.

The newly elected president announced the following:

STANDING COMMITTEES.

(1) Epidemic, endemic and contagious diseases, H. F. Lyster, M. D.

(2) Sewerage and drainage, H. F. Lyster, M. D.

(3) Foods, drinks, and water-supply, V. C. Vaughan, M. D.

(4) Buildings: including ventilation, heating, etc., John Avery, M. D.

(5) Climate, geology, topography, etc., Henry B. Baker, M. D.

(6) Disposal of excreta, John H. Kellogg, M. D.

(7) Poisons, explosives, etc., V. C. Vaughan, M. D.

(8) Occupations, recreations and habits, J. H. Kellogg, M. D.

(9) Relations of schools to health, John Avery M. D.

(10) Sanitary survey, C. V. Tyler, M. D.

(11) The death-rate as influenced by age, Henry B. Baker, M. D.

(12) Legislation, C. V. Tyler, M. D.

(13) Finances of the Board, Arthur Hazlewood, M. D.

(14) Mental Hygiene, Arthur Hazlewood, M. D.

(15) Diseases of animals, Henry B. Baker, M. D.

(16) Relations of preventable sickness to taxation, John H. Kellogg, M. D.

These nominations were confirmed by the Board.

Dr. Baker as committee on diseases of animals reported an effort being made in the legislature to secure an appropriation for the State Board of Cattle Commissioners.

Dr. Tyler reported the presence of a bill in the legislature prohibiting putting sawdust into streams.

Dr Hazelwood reported that he had frequently seen old oil barrels being collected in Grand Rapids, from which the brand had not been erased, and often on new invoices of oil, the inspector's brand was so indistinct that the date of inspection could not be deciphered.

The secretary was requested to prepare a memorial to the president of the United States, petitioning that he place the $100,000 appropriation in the hands of the National Board of Health.

The Board performed much routine business, and adjourned to meet at Reed City, Michigan, April 26 and 27, 1883, at which time there will be a sanitary convention at that place under its auspices.

TRANSLATIONS.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.

BY RALPH D'ARY M. D., ROMEO, MICHIGAN.

SUBPHRENIC ABSCESS.

Both cases here related present a remarkable similarity: In both the abscesses were formed between the upper surface of the liver and the diaphragm; both were caused by circumscribed perityphlitis; in both, the pus found its way through the right half of the diaphragm into the lung and was expectorated. In one case Pætsch made an incision into the abscess, though only after it had partly emptied itself through the lung. In the other case Starcke deemed it dangerous to open the abscess, yet the case terminated favorably, although after a very chronic course with dangerous exacerbation.

The case of Pætsch came under observation at an earlier stage and therefore he could observe that the abscess was formed *without any participation of the thoracic organs*, and that the lung only became affected after the abscess had burrowed into it. The differences between the two cases will be touched upon when describing each separately.

Starcke thinks that his is the first recorded case of recovery without operation; and Pætsch that his is the first case operated on in an adult that terminated in recovery, and states that he knows of but one other case of recovery after an operation, but it was that of a boy, seven years old, operated on by Classen, of Hamburg. We have purposely collected these two cases and shall describe them in detail, since the disease is not often met with.

(1) *The Case of Pætsch.*—On the 8th of April, 1881, a sailor aged nineteen, was admitted into the Charité (Berlin). Four days previously he was suddenly attacked with pain in the hypogastrium, nausea and vomiting. In the right iliac region there was considerable tenderness and a sharply defined elastic swelling. The other organs were normal. His general condition

was bad; he had fever and was much exhausted. In the course of two weeks these symptoms gradually disappeared with the exception of a slight increase of temperature in the evening. But on April 25th the patient complaned of stinging pains in the region of the right sixth and seventh rib, in front and on the side; he had rigors and the temperature rose considerably. Percussion of the thorax, on the right side revealed dullness from the fourth rib downwards, blending with the hepatic dullness; over the whole of this region respiratory murmur was absent. The intercostal spaces were neither widened nor prominent, but were painful on pressure. There was not the least cough nor expectoration. Wherever the percussion sound was normal the respiratory murmur also was normal.

These symptoms unmistakably indicated exudation, not in the pleural cavity, but below the diaphragm, between it and the liver, the diaphragm being in that region pushed up by the exudation. This opinion was confirmed by an exploratory pucture with the hypodermic syringe which extracted some liquid fetid pus. It is evident that the latter could not have been in the pleural cavity without producing irritation of the of the pleura and lung. Paracentesis was determined upon, but for some reason was delayed for two days and in the second night the patient had a violent fit of coughing during which there gushed from his mouth about half a litre of fetid fluid exactly like the pus extracted with the syringe. Simultaneously there set in symtoms of pyopneumothorax. Although after this the patient's general condition improved, and the fever abated, the improvement was not permanent. The coughing spells became so torturing that it was again determined to perform paracentisis, which was done along the upper border of the seventh rib, in the anterior axillary line. Over two pounds of pus came out and the cavity was disinfected with thymol. The finger introduced into the wound could distinctly recognize: above—the diaphragm; below—the liver. After the operation the patient's condition improved remarkably and the cough soon ceased. On the twelfth day the last drainage tube was removed and in four days more the wound had healed and the patient got well.

Subphrenic abscess may be caused by injuries of the liver, perforating ulcers of the stomach or duodenum; whilst according to Pætsch's assertion, its causation by perforation of the vermiform appendix or by perityphlitis had not yet been demonstrated, although theoretically admitted as possible. This is an error, as Jaffé has described a case of subphrenic abscess that he had operated on, and which resulted from perityphlitis. (See *D. Med. Woch.*, 1881, Numbers XVI and XVII).

The diagnosis of the above case was easy and there could be no question of primary empyema, if the course of the disease was well considered. In other published cases the diagnosis had been very difficult, because when they came under observation, secondary empyema had already taken place and the history of the cases was obscure. The author advises operation *in every case.*

(2) *Starcke's Case.*—A strong, healthy valet, aged nineteen, on September 2, 1880, being very much heated, took a cold drink, and very soon after felt a severe pain in the right iliac region, where there appeared an elongated swelling. Then followed severe "stitches" in the right hypochondrium. When he entered the hospital he had fever and the swelling was moderately painful. It reached from the groin to the umbilicus perityphlitic abscess). In the right half of the thorax there was pleuritic exudation, which subsequently rose to the fossa supraspinata, where loud friction sounds could be heard. (This pleuritic exudation I question.—SPRIMON). The patient suffered with dyspnœa, breathing forty-eight times per minute. His temperature evenings was 39.3°. (Not a word about cough!) —SPRIMON). On the thirteenth day the dyspnœa increased, abundant frothy mucus was being coughed up, the patient became cyanotic, had involuntary diarrhœic discharges and abundant perspiration, and suddenly with coughing there gushed from his mouth about one and one-half litre of excessively fetid, fluid, grayish-yellow, frothy pus. A thorough examination could not be undertaken till a few days later (?), after he had got rested. He was then very much exhausted, cyanotic, covered with perspiration, respired forty-eight times per minute, pulse 120, temperature 38.3°. The right side breathed badly. The intercostal spaces were alike on both sides, and were equally drawn in in respiration. The impulse of the heart was external to the mammillary line. Resonance was increased under the right clavicle, with cracked pot sound. Dullness extended from the level of the nipple to the margin of the ribs, where the tympanitic sound began, posteriorly dullness extends from the level of the middle of the scapula to that of its angle; lower, there was a high tympanitic sound. Corresponding with the area of dullness, the respiratory murmur was weak anteriorly, there was bronchial breathing and pectoriloquy. The tumor in the abdomen had decreased and was less painful.

Diagnosis.—Abscess between the liver and diaphragm, originating from perityphlitis; pleuritis diaphragmatica adhæsiva; the cavity of the abscess communicates with the right bronchi. Exploratory puncture of the pleura brought out clear serum. What was to be done? asks the author, and answers: The abscess ought to be opened. Nevertheless he durst not do it, for fear that he might have to go deep, and whilst he wavered the patient began to improve. He was treated with inhalations of turpentine and carbolic acid and the expectoration became less fetid and the heart recovered its normal position. In two weeks, however, a relapse took place, the fever increased, and the expectorated matter assumed a dirty-rusty color, indicating pneumonia infiltration. Exploratory punctures were again made posteriorly in the seventh and eighth intercostal spaces, and anteriorly in the fourth (Why not lower?—SPRIMON) and every time there was nothing but blood in the syringe. Then all efforts were abandoned and expectant treatment adopted. Two months after the admission of the patient there was another relapse. Again punctures were made without result and Dr. Starcke concluded there was no more abscess (!). The unhappy patient (A victim of *expectant* treatment.—SPRIMON) fluttered between life and death for five months, and was finally dismissed with the lung immoveable and adherent anteriorly and diaphragm abnormally high. When the patient coughed, even as late as four months after his admission, he still expectorated from fifty to one hundred grams every time!

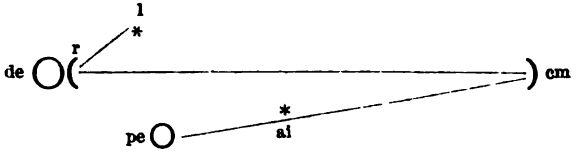
I believe that this case which recovered only as it were by a miracle, plainly shows the necessity to operate in these cases.—Professor Sprimon in *Med. Obozr.*

A NEW OPHTHALMOSCOPE.

Dr. Af Schulten, of Helsingfors, Finland, has constructed an ophthalmoscope which enlarges the fundus oculi thirty to sixty times and gives an unusually clear image. Besides that its use is very easy and requires hardly any practice. The parallel rays from the eye are collected by means of a concave mirror of twenty-five to fifty centimetres focus and twelve centimeters diameter to form the image which is to be examined. The myopia or presbyopia of the observer's eye should be corrected. Illumination is obtained by means of a perforated concave mirror or reflector, which throws the lamplight on the opthalmoscope proper, and thence into the eye. The observer looks through the perforated mirror and sees the real ærial image of the fundus oculi. The reflector should be at such a distance from the focus of the opthalmoscope or collecting mirror that the eye of the observer may easily accommodate itself to see the image reflected in it.

This being arranged, the eye under examination should be placed at such a distance from the collecting mirror that the shadow from the central aperture of the reflector should be clearly seen on the cornea of the patient's eye. The reflector should have a focus length of fifteen to twenty centimeters, and a diameter of ten centimeters. The best illumination is obtained by placing the lamp within the focal distance of the reflector. The central opening in the latter should be *small.* When it is larger than the patient's pupil, or of equal size with it, the field of vision remains dark. The patient's eye should of course remain perfectly quiet, and had best be placed within the focal distance of the ophtholmoscope proper, otherwise the field of vision would be too small.*

This apparatus shows the vessels in a rabbit's eye as large as a crow or goose-quill, and in the eye of a frog I succeeded in seeing the movement of the white blood-corpuscles. I have also succeeded in examining the rabbit's eye by means of two ordinary otoscopes, by fastening each one to a separate stand. The following diagram will supply all further explanation:



De—doctor's eye, pe—patient's eye, l lamp, ai—aërial image, r perforated reflector with twenty centimeter focus, cm—concave mirror with thirty centimeter focus; distance between r and cm—seventy centimeters; distance between ai and cm—thirty centimeters; distance between pe and cm—fifty-two centimeters.—Buch in *Vratch.*

ABSCESS OF THE SPLEEN, EMPTIED THROUGH THE LUNG.

BY N. JOUKH, in *Med. Oboz.*

E. B., a soldier, tall, with well-developed bony skeleton, pale skin and mucous membranes, and flabby muscles, entered the hospital in January with the following symptoms: Pyrexia, pain in the abdomen, constipation and coated tongue. He had rigors two or three times a day, and his temperature in the evening reached 39° to 40°.

The left side of the trunk was fuller than the right, and the respiratory excursion of the left side of the thorax was less than that of the right side; the heart was displaced upwards; along the left axillary line dullness begins at the fifth rib, and soon merges into *absolute* dullness, which extends as far as the lower border of the ribs, anteriorly as far as the mammillary line, and merges into the area of dullness over the kidney. The boundaries of the left lung are normal posteriorly. There is no fremitus over the dull area, the respiratory murmur is weakened; when coughing, there are rales in both lungs. The spleen protrudes from under the ribs and is painful on pressure; urine scanty, 1028. The appetite is poor; there is diarrhœa. He cannot lie on his left side because of pain. Formerly the patient suffered frequently with intermittent fever.

Diagnosis.—Chronic malarial cachexy.

One night, soon after admission, the patient had a violent

[*The reader will understand that the *perforated* mirror, commonly called the ophthalmoscope, is here called the reflector, whilst the non-perforated mirror receiving the image of the patient's eye, is called the "ophthalmoscope proper" or collecting mirror.—D'Ary.]

coughing fit, and expectorated in such quantity that he could hardly spit fast enough. During the night he had expectorated about fourteen ounces of yellowish-red, thick, odorless, frothy pus. In the morning he felt exhausted, temperature was below normal, and the pain in the side was less; he also expectorated less. The expectorated fluid contained pus corpuscles, a few red corpuscles and crystals of fatty acids. On the left side the area of dullness had become considerably smaller and the spleen had retreated behind the ribs. Towards the end of the week the area of dullness on the left side was only half of its former size; percussion did not show any dullness in the lower lobe of the left lung. On auscultation there could be heard amphoric sounds, which I ascribed to the neighborhood of the stomach, which served as resonator. Towards the end of the second week the expectoration became mucous and less in quantity; the patient's strength had failed considerably. Six weeks after admission he died with symtoms of cardiac and general exhaustion.

Autopsy.—Anæmia and œdema of the encephalon. Marginal emphysema and œdema of the lower lobe of right lung. Adhesions of lower lobe of left lung with the diaphragm over an area equal in size to a silver dollar. Through this adhesion was was a passage from a cavity in the lung of about the size of a walnut, to another cavity in the upper third of the spleen, as large as a hen's egg. The passage through the diaphragm lay outward and anteriorly to the œsophageal opening. The spleen was enlarged and more solid than normal; the trabeculæ were very prominent. The liver was anæmic, the heart flaccid.

The patient, therefore, had had a primary abcess in the spleen, which had caused adhesive inflammation in the diaphragm and left pleura, and infiltration of the left lung, with consequent softening and perforation. In this way the contents of the splenic abscess were discharged through the diaphragm into the lungs, bronchi, etc.

Splenic abscesses are caused by infectious diseases, embolism of the bloodvessels, hemorrhagic infiltration, etc. In the above case the etiology of the abscess remains unexplained. Such abscesses may terminate in recovery after cicatrization or deposition of chalky matter in the cavity of the abscess.

PERMANENT ŒSOPHAGEAL CATHETER.

Because of the difficulty of catheterization and the daily introductions of bougies in cases of contraction or obstruction of the œsophagus, and also with a view to preventing a possible complete occlusion from fast growing tumors, M. Krishaber, in *Annales des maladies de l'oreille*, 1881 No. V., describes his method of permanently leaving a catheter in the œsophagus.

The catheter is introduced through the nostril, and after it has entered the stomach, is fastened externally by means of a bone wedge(?). The patient is then nourished through an irrigator, which is attached to the catheter. If too much food has been introduced, consisting of milk, raw eggs, chopped meat, with soup and wine, the excess is expelled through the catheter.

If the contractions are very excessive, so that it is impossible to introduce a hard rubber catheter, an elastic one is first introduced, and in a few days there will be no difficulty to introduce the hard one, which is better tolerated by patients. In one case the author had left a catheter in situ three hundred and five days, in another, forty-six; in a third, one hundred and sixty-five, and in a fourth case, two hundred and fifty-one days. The same food which formerly could be swallowed only with the greatest difficulty, passed readily into the stomach.

The permanent catheter can also be used in œsophagotomy. It may also be useful after operations on the lips, and in the naso-pharyngeal region when the movements of deglutition are to be avoided. It might also avert death from starvation in some cases of amputation of the tongue or jaw. In cases of operations of staphyloraphy or uranoplasty, the catheter should be introduced some days beforehand, as it causes at first an irritation of the Schneiderian membrane, with sneezing. In a word, it may be used in all cases where it would be desirable to administer food, but where there is inability of the patient to swallow it, either from wound, paralysis or unconsciousness, or opposition, as in insanity. [Abbreviated.]—*Med. Oboze.*

Translations from German Journals for THE PHYSICIAN AND SURGEON.
BY VICTOR C. VAUGHAN, M. D.

VAGINAL HEMORRHAGE IN AN INFANT.

Pollak (*Wien. med. Presse*) reports the following interesting case: He observed in an infant, four days old, a considerable hemorrhage from the vagina. On the third day after its appearance, the flow was reddish-brown; later, it was chocolate colored, and ceased on the ninth day. Simultaneously with the flow, the breasts were swollen and pressure produced a few drops of a milky fluid.

THE PHOSPHATES IN PREGNANCY.

According to Delattre (*Gaz. des Hop.*) the phosphates which are reduced to a minimum in the urine during pregnancy, do not go directly to the nourishment of the fœtus, but are stored up in the bones of the mother. For this reason, the bones become heavier and osteophytes are formed. During the latter months of pregnancy and during lactation this store of phosphorus is drawn upon in order to nourish the child.

AMONIACAL IRON PEPTON FOR HYPODERMATIC USE.

Jaillet & Quillart (*Bull. de Ther.*) gives the following formula for the preparation of iron and pepton for hypodermatic use:

℞.	Pepton. siccat	5	00.
	Ferri sesquichlor, liq	6	00.
	Glycer. neutral	50	00.
	Aq. laurour	150	00.
	Ammon. liq	q.	s.

The pepton is dissolved in fifty cubic centimetres of cherry-laurel water and the glycerin added. The iron solution is diluted with twenty-five cubic centimetres of the cherry-laurel water, and the two solutions are mixed. Then the ammonia is added, drop by drop, as long as the flocculent precipitate, which forms, is redissolved, avoiding an excess. Finally, the whole is diluted with cherry-laurel water, until the whole is two hundred cubic centimetres, when it is ready for use.

THE ACTION AND THERAPEUTIC USES OF CHINOLIN.

Dr. Donath (*Prag. Med. Wchnschr.*) has made a report of the results of his studies of chinolin. In the first place, he thinks that the unfavorable results obtained by Jaksch, with this drug, were due to the use of an acid solution and too large doses. Instead of the chloride of chinolin, which has a burning taste, penetrating odor, and is so hygroscopic that it can be used only in solution, D. uses the tartrate, which has a slightly pungent, peppermint-like taste, and it may be given in capsules. The dose for adults is from five-tenths to one gram in capsule two or three times per day; for children, D. orders a solution of one gram to fifty grams each of water and simple syrup, to be taken in four or more doses according to age and condition of patient. It should never be given in a solution stronger than two per cent.

That the drug, when given in large doses, may be excreted in the urine, D. does not deny; but he has been unable to find it in the urine after two days medicinal use. From this, he concludes that the substance is oxidized in the body, probably converted into pyridincarbonic acid, which is formed by the artificial oxidation of the chinolin.

In his experiments with this drug on the reduction of temperature, D. used the chinolin, prepared from cinchonin, but as the drug thus prepared is not pure, Biach & Loimann (*Virchow's Archiv*) have experimented with the drug prepared synthetically according to the method of Skraup. This method consists in heating to 140–150° a mixture of aniline, nitrobenzol, glycerine and sulphuric acid. The formula for chinolin is $C_9 H_7 N + 11 H_2 O$.

Biach & Loimann used a ten per cent. solution of the tartrate upon rabbits, both subcutaneously and by mouth. The most marked fall of temperature after the use of one-tenth of a gram of the drug was 1.1°, the least 0.3°. After the use of two-tenths of a gram the temperature sank, in one case, after an hour, 3.9°. After the use of from three to five-tenths of a gram the temperature frequently fell to 32° and even lower. In some cases, however, two tenths of a gram proved fatal to the rabbits. After a dose of six-tenths of a gram, complete paralysis, loss of reflex, collapse and death resulted. On section, hyperæmia and œdema of the lungs were found in three cases out of four.—*Schmidt's Jahrbücher.*

THE EFFECT OF ALCOHOL ON STOMACHIC DIGESTION.

Buchner, (*Deutsches Archiv f. klin. Med.*) after having made a long series of experiments as to the effect of alcohol upon both artificial and natural digestion, comes to the following conclusions:

(1) Alcohol, as such, up to ten per cent. has no effect upon artificial digestion.

(2) When added to twenty per cent., it retards artificial digestion.

(3) In larger amounts it completely arrests the process.

(4) Beer, when undiluted arrests digestion.

(5) Red and sweet wines have the same effect; while white wine only delays the process.

(6) In natural digestion, beer seems to delay digestion.

(7) The same is true of wine.

(8) In diseases of the stomach, these effects are more marked, and beer and wine may completely arrest digestion.

BLENNORRHAGIC INFLAMMATION OF THE RECTUM.

Professor Thiry (*Presse Med.*) reports the following unique case: A man, twenty-six years of age, was brought to the hospital complaining of pain on going to stool and of a purulent discharge from the anus, which had existed for a considerable time and of late had grown worse. The rectum was funnel-shaped and presented those appearances which are described as characteristic of coitus analis. A large sized vaginal speculum was introduced into the rectum, causing great pain. The entire mucous membrane of the rectum was covered with pus. The patient acknowledged having had coitus analis with gonorrhœal men.

The rectum was irrigated with water and a solution of borax, and after four days marked improvement was noticed. After this injections were made with a decoction of oak-bark and with bismuth. Saline cathartics were used. After a treatment of twenty-five days, the patient was dismissed wholly cured.

BOOK REVIEWS.

TRANSACTIONS OF THE THIRTY-SECOND ANNUAL MEETING OF THE ILLINOIS STATE MEDICAL SOCIETY, HELD AT QUINCY, MAY 16, 17, 18, 1882. Chicago: Charles J. Johnson, Printer and Binder, 138 and 140 Lake Street.

The above transactions in no way differ from hundreds of others, and need no special comment. There is the usual amount of useful practical matter and the usual amount of unfinished colorless mediocrity. Many questions of absorbing interest are introduced with considerable promise, so as to rouse the interest; and finally left exactly where they were before. The president's address, comparing the standing of medicine and medical men nowadays to that fifty years ago, is interesting. The report on practical medicine, by W. O. Ensign, of Rutland, is good and useful to local practitioners. The following deserves special notice, and is taken from the report on Obstetrics, by J. B. Davison, Moline.

"Dr. Staples, of Dubuque, Iowa, some time ago suggested the subcutaneous administration of a mixture of tincture aconite, r. and tr. ver. vir., as a remedy not only for puerperal convulsions, but for the same when dependent upon other causes. We wish to incorporate briefly the notes of a case treated as suggested by Dr. Staples. Mrs. G. White, aged twenty-eight; seen first between 3 and 4 A. M. She was found to be suffering from most frightful convulsions, black in the face, frothing at the mouth, with stertorous breathing, pulse 170, and she appeared to be dying. She was far advanced in her third pregnancy, but not in labor. She was large, fleshy, and her face, hands and lower extremities œdematous, the lower limbs enormously distended. As soon as possible four drops each of tr. aconite rad. and tr. ver. vir. were injected into her arm. It was now 4 o'clock. In 40 minutes the injection was repeated, but the ver. vir. increased to six drops. At 5:30 her pulse numbered 78. At 7 she spoke intelligently and had no return of convulsions."

Dr. A. C. Carr's article "Can the asphyxiated stillborn child be resuscitated?" is useful and interesting. He considers the question practically and theoretically, on physiological grounds, and very ably tries to prove the affirmative, giving numerous references to literature on the subject. It is a valuable paper, and ought to find a wide circulation.

The paper by A. E. Prince, M. D., will be found interesting by ophthalmologists, as treating on "*asthenopia atonia*," and suggesting a remedy. The following is a resumé: *Asthenopia atonia* is a term of his own coining, designating that form of weakness of vision which does not seem to arise from the errors of refraction usually recognized as the cause of most cases of asthenopia, whether muscular or accommodative, and which continues after those errors have been apparently corrected. "In these cases, there being no error of refraction of muscular insufficiency, we must look on them as due to inefficiency of one or more parts of the eye to do the normal work. The condition has been called ciliary exhaustion, for it is under accommodation that they fall, and this is not a particularly objectionable title, except in so far as it expresses only part of the exhausted conditions. By another author it has been called retinal asthenopia, and by still others, congestive asthenopia, while I, because all the structures of the eye are liable to be below their normal degree of activity, have chosen the name of atonic asthenopia as being more general, and more accurately defining the condition." "Clonic accommodation, so to speak, is not defective, but the failure lies in the power of endurance."

"*What we want in these cases is to enable the individual to work without demanding of him the full amount of tension which is required of the normal eye.* For the normal eye in reading at fifteen inches distance, the tension is equal to two and one-half units of accommodation. If a glass of thirty inches focus (1.25 units) be placed before the eyes while the individual is reading at the distance of fifteen inches, the *ciliary muscle* will be rested just fifty per cent., but such a glass is found to be uncomfortable and will not be tolerated at all, and *in the relief of this discomfort we must look for the solution of our problem.* . . . . Now when the eyes are directed at an object under an accommodation of one D., the optical axes are converged by an associated action of the internal recti by an equivalent force which is expressed in degrees, and for each degree of accommodation there is an equivalent force expended in the convergence of the optical axes, to produce binocular vision for that point. This is what may be termed the law of recto-ciliary relationship, and when we place before the normal eye a convex glass of one degree, we violate that law just three degrees, and it will require a prism of thirty, with its base inwards, in connection with that glass of + one degree to preserve that law of recto-ciliary relationship. With such a glass as this, any normal eye will be able to see with absolute comfort: an object at the distance of a metre, with all the muscles of the eye at rest; at the distance of half a metre, with fifty per cent. of rest, etc.

"The combination I most frequently use is + 1 25-100 degrees (= + 1-30) combined with a prism of four degrees with its base inwards, and this glass I have ground by A. S. Aloe, Saint Louis." He advises to be particular about having the prisms set right in the frames. "If the axis of the prism is not perfectly perpendicular, there will be a vertical prismatic action. . . . . This defect can be very easily detected by holding the glass eighteen inches before the eyes and directing them to some remote object, which will of course appear double, when if the glass is correct the two images will appear in a horizontal plane. . . . . A slight defect can easily be corrected by rotating the glasses in the frames."

Dr. Joseph Robbins furnishes an article recommending copious and persistent hot water injections for the relief of tenesmus and pain in dysentery, if possible by constant irrigation, passing the water in and out through two rubber catheters. Dr. W. O. Mendenhall strongly recommends the *eau albumineuse*, of Trousseau, to be given as a drink to children suffering with diarrhea. "This, diligently administered, *will give prompt relief and sweet sleep*. It is made by stirring into a glass of cold water the white of an egg, with the addition of a little sugar and essence of cinnamon."

Dr. Ellen A. Ingersoll describes a rare case of hydrocele in the female.

Dr. E. Wyllys Andrews, of Chicago, cautions the profession against too implicit reliance on the statements of Dr. Dèclat (the same who last month sent his pamphlets around) concerning phenic acid in cancer cases. The doctor showed him one of his cancer cases in process of cure, which was not cancer at all, but an indolent ulcer.

Dr. E. P. Coor presents a good synopsis of opinions on the question "Is croupous pneumonia a local disease or a general zymotic fever?"

The volume of "Transactions" is neatly bound and printed. The paper is excellent, but the book swarms with typographical errors which are a disgrace to a professional work.

D'ARY.

HEADACHES: THEIR NATURE, CAUSES AND TREATMENT.

By William Henry Day, M. D., member of the Royal College of Physicians of London, Physician to the Samaritan Hospital for Women and Children and author of a systematic treatise "On Diseases of Children." Fourth edition; cloth; pages, 147. Price, $1.25. Paper; price 75 cents. Philadelphia: P. Blakiston, Son & Co., 1883. For sale by Sheehan & Co., Ann Arbor.

About two years ago we gave a full and favorable review of the third edition of Dr. Day's work. We can confirm what we then said of the excellence of this monograph. Headaches are the bane of the lives of many, and too frequently the physician fails to ascertain the true nature of the trouble and therefore fails in his treatment. Dr. Day discusses the various kinds of headache and gives the method of recognizing them and their treatment. The following are the heads under which he discusses the subject: (1) The headache of cerebral anæmia, (2) of cerebral hyperæmia, (3) sympathetic headache, (4) dyspeptic or bilious headache, (5) congestive headache, (6) headache from plethora and increased vascular action, (7) headache from exhaustion, or from some peculiar change in the cerebral tissue, nervous headache, (8) nervo-hyperaemic headache, (9) toxæmic headache, (10) arthritic or gouty headache, (11) rheumatic headache, (12) headache from affections of the periosteum, (13) organic or structural headache, (14) headaches of advanced life, (15) neuralgic headache, (16) headaches of childhood and early life.

At the close of the volume, thirteen pages of select formulæ are given.

A MANUAL OF AUSCULTATION AND PERCUSSION; EMBRACING THE PHYSICAL DIAGNOSIS OF DISEASES OF THE LUNGS AND HEART, AND OF THORACIC ANEURISM. **By Austin Flint, M. D., Professor of the Principles and Practice of Medicine and of Clinical Medicine in the Bellevue Hospital Medical College, etc., etc. Third edition, revised. Cloth; pages 241. Philadelphia: Henry C. Lea's Son & Co., 1883. For sale by Sheehan & Co., Ann Arbor.**

Only a short time ago, we gave quite an extended notice of the second edition of this work, and in doing so we found occasion to speak highly in its praise. In this line, Dr. Flint is not merely an author, but he is more—an original investigator. As long ago as 1852, he wrote a prize essay on a point connected with this subject, and ever since, he has continued his special studies in this direction. Therefore, he speaks as one of authority. For clearness and conciseness this small volume is a model. In the present edition the most important addition is that giving the modes by which pulmonary signs may be reproduced in the lungs removed from the body, and by artificial illustrations. Other minor additions have been made, and some slight changes in text are noticed. We commend the volume most heartily.

A MANUAL OF CHEMICAL ANALYSIS AS APPLIED TO THE EXAMINATION OF MEDICINAL CHEMICALS. A GUIDE FOR THE DETERMINATION OF THEIR IDENTITY AND QUALITY, AND FOR THE DETECTION OF IMPURITIES AND AND ADULTERATIONS. FOR THE USE OF PHARMACISTS, PHYSICIANS, DRUGGISTS, MANUFACTURING CHEMISTS, AND PHARMACEUTICAL AND MEDICAL STUDENTS. **Third edition thoroughly revised and greatly enlarged. By Frederick Hoffmann, A. M., Ph. D., Public Analyst to the State of New York, etc.; and Frederick B. Power, Ph. D., Professor of Analytical Chemistry in the Philadelphia College of Pharmacy. Cloth, pages 624. Philadelphia: Henry C. Lea's Sons & Co. 1883. For sale by Sheehan & Co., Ann Arbor.**

The previous editions of this work have done much good in awakening a scientific interest among the practical pharmacists of this country. Every druggist should be able to test the purity of his own drugs, and with this volume before him he can have no excuse for remaining ignorant on this point. The druggist should do this work for his own sake, so that adulterated goods may not be palmed off on him, and for the sake of the physicians who patronize him. The wise physician will send his prescriptions to the most reliable druggist. Again the physician should be able to test the purity of medicines, in order that he may decide in case of doubt whether his patient is getting the medicine prescribed. In many cases, the failure of the physician to effect a cure is due to either the ignorance, carelessness or dishonesty of his druggist. We have known druggists to substitute one drug for another in a prescription without consulting the prescribing physician. This is dishonesty in its worst form, harmful to the reputation of the physician and dangerous to the life of the patient. The physician should be able to detect these frauds. Again some of our manufacturing chemists sometimes send out worthless drugs, or drugs under false names, as was illustrated a few years ago in the "sweet quinine," which found such ready sale until a chemist exposed the fraud. We think that we have thus given reasons sufficient to demonstrate the great utility of a work devoted to chemical examination of drugs. Then again, love for one's work and a desire to know the nature of the articles which he compounds should lead the druggist to a systematic analysis of his goods; while a better acquaintance with the chemistry of drugs may aid the physician much in his directions to the pharmacist.

This volume is divided into two parts. There are (1) a description of reagents and operations, and (2) the physical and characteristics of medicinal substances.

The descriptions of reagents and operations are clear and concise. This point of the work is necessary only to those who have had no sufficient laboratory instruction. The practical work lies in the second part, and we may say that the tests for adulterations are reliable in character and sufficient in number.

The book presents many points of special excellence, aside from the general recommendation already given. We only mention the plates of crystalline forms given with the descriptions. We hope that these will induce our druggists to enter into that useful and interesting study of microscopical analysis, which, while it has been extensively used by a few, has not been so generally entered into as its merits deserve. In the second place, we may state that the introduction of the chemical formulæ is wise. These cabalistic letters may be the means of leading the young pharmacist to a thorough study of chemistry, and certainly there is great need of scientifically educated pharmacists.

We recommend the book especially to the medical student and young pharmacist, hoping, however, that their interest in the work will carry them on to a more thorough understanding of the great science of chemistry.

MEDICAL AND SURGICAL ASPECTS OF IN-KNEE (GENU-VALGUM): ITS RELATIONS TO RICKETS, ITS PREVENTION AND ITS TREATMENT WITH AND WITHOUT SURGICAL OPERATION.

By W. J. Little, M. D., F. R. C. P., late Senior Physician to and Lecturer on Medicine at the London Hospital, etc., ect. Assisted by E. Muirhard Little, M. R. C. S. Cloth; pages, 161. D. Appleton & Co., New York: 1882. For sale by John Moore, Ann Arbor.

This is a valuable monograph. On this subject Dr. Little has been an authority for nearly half a century. He was the first to study the etiology and morbid anatomy of in-knee which was discussed by him in his lectures on deformities pnblished in the *Lancet* in 1843–4.

As to the etiology of this affection, the author differs from Macewen and others, who hold that in-knee is always rachitic in origin. The following clinical varieties are given: (a) Atonic, iodiopathic, statical or uncomplicated genu-valgum, not rachitic, in infants hand-fed upon improper and too watery diet before or when beginning to walk, (b) As in older, strong-limbed children who had for one year or more walked perfectly well until they became affected with general debility followed by genu-valgum, as a sequela of scarlet, gastric and other fevers; too early return to the use of the limbs in such persons having engendered weak or in-knee, sometimes accompanied with other distortions caused by premature use of trunk and limbs such as scoliosis and flat-foot, (c) As in adolescents, not rachitic, suffering from general debility caused by too rapid growth, late hours, too much standing and too much carrying of heavy weights, as in pursuing particular mechanical occupations, often aggravated amongst the very poor by insufficient feeding, (d) As in children congenitally weak, with congenital heart, vascular and capillary disease (cyanosis), or lung diseases (atalectasis), rarely from non-congenital heart disease, (e) From over use of a sound knee having accommodated itself to a short opposite, or to a weak, wasted neighbor, (f) As in over-fed, over-stout, fat, heavy infants, over-stout and over-tall adolescents. To these former are added those which are due to rachitis and from rheumatic and strumous affections of the knee.

As to the morbid anatomy, Dr. Little thinks that the trouble lies more frequently in arrested growth of the external condylar part, than in excessive growth of the internal codylar part. In-knee not due to rachitis often occurs at a time when the body is growing most rapidly, either during childhood or adolescence. The author dwells at considerable length on the signs of rickets; for if this be the cause of in-knee, the prognosis becomes much more unfavorable.

The chapter upon treatment is most interesting and instructive. Space will not permit us to enter into the details of his treatment; for this we must refer our readers to the volume itself. Suffice it to say that treatment by manipulation and mechanical contrivances, together with constitutional measures, when needed, is highly recommended. The volume closes with a chapter upon osteotomy, an operation which the author considers never necessary or justifiable in uncomplicated inknee in childhood, but one that may be necessary in the long neglected cases with curve of the femur, which is seen in adolescents.

This monograph is one of great value and should be in the library of every surgeon.

SELECTED ABSTRACTS.

TREATMENT OF EPILEPSY WITH SODIUM NITRITE.

At the meeting of the Royal Medical and Chirurgical Society, held on November 28, Dr. Chas. H. Ralfe claimed the credit of first introducing this drug for the treatment of epilepsy, for Dr. Law, of Hastings, who was the first to administer it, and who had fully described the theoretical reasons which led him to employ it, together with an account of its physiological action, in the *Practitioner* for June of the current year. Sodium nitrite in its action resembled nitrite of amyl and nitro-glycerine. It had one advantage over these remedies for the treatment of epilepsy; its effects were produced more slowly, and were more permanent in character. The dose should just fall short of producing full physiological effect. The author advised that care should be taken to ascertain the purity of the drug, as many samples contained an admixture of sodium nitrate. The details of seventeen cases treated by the author in the outpatient department of the London Hospital were given. Of these seventeen cases, three received no benefit, four improved slightly, one was a doubtful case, whilst nine were benefited decidedly. Of all the cases, eight, previously to treatment with sodium nitrite, had been treated with bromide of potassium. Of these, three had improved under its use, and went back when the medicine was changed to sodium nitrite. Of the other five, the bromide treatment was inefficacious from the first in three cases; and in two, though it had done good for som time, it was losing its effect, and the patients were suffering from "bromism." In four of these cases, decided improvement followed the change to sodium nitrite, and the other improved to a lesser degree under its use. Nine of the patients commenced treatment directly with sodium nitrite. Of these, the disease in four was of long standing, and probably the patients had already been subjected to a course of bromide of potassium at other hospitals. Of these, two improved under sodium nitrite, and two received decided benefit. The remaining five cases were all tolerably recent ones. Of these, three received decided benefit, one slightly improved, and one was a doubtful case. Among the cases that received decided benefit, the longest exemption from any kind of epileptiform seizure, was one who went eleven weeks without an attack—four weeks whilst under treatment, and seven weeks after leaving off the medicine. Another patient went eight weeks without an attack, and had no relapse at the time he was last seen; he was still an outpatient, and taking the medicine. Previously to commencing treatment, he had on an average three fits a fortnight, and they were increasing. Another remained free for a period of four weeks, and had no recurrence when he gave up his out-patient letter. Another, who had a fit on an average every week, after taking the medicine was free for five weeks. The same result obtained with another, who was free for one month. The author drew the following conclusions from these results. (1) Those cases in which bromide of potassium is of marked service are not generally suitable for a trial or sodium nitrite. (2) Those cases in which bromide of potasium does not agree well from the first, will probably be found to improve under sodium nitrite. (3) To patients who have taken bromide some time, and in whom the drug is apparently losing its effect, or who are suffering from bromism, sodium nitrite is useful as a change of medicine. (4) There is a class of cases, consisting chiefly of minor seizures or convulsive attacks, such as often occur in young persons usually at night, in which sodium nitrite is especially beneficial.—*British Medical Journal*, December 2, 1882.—*American Journal of Medical Science.*

EXTERNAL APPLICATION OF BELLADONNA IN INTESTINAL OBSTRUCTION.

Mr. Morton *London Lancet* reports the following:

A man, aged twenty-five, was admitted on December 28, 1882, suffering from obstinate constipation. The bowels had not been opened for fourteen days, with the exception of a little scybala passed after enemata occasionally. Until a fortnight ago the bowels had always been open regularly. The insuperable constipation had not been accompanied at its commencement by any acute symptoms, nor had blood ever been passed per anum. There was no history of his ever having had hepatic colic. There had been loss of flesh of late. For a fortnight he had vomited occasionally; had had much pain in his abdomen. The belly was much distended, but the walls were not tense. At times there was a soft, defined swelling in the right iliac region about the size of the cæcum. No lumps or bowel could be felt; there was no hernia. Nothing abnormal could be felt per rectum; a large quantitity of fluid could be injected. He had taken all kinds of purgatives before admission, without any action of the bowels being produced by them. Ordered one grain of opium every six hours; also cold, strong beef-tea and milk in small quantities often. Next day he was free from vomiting and pain in the abdomen; bowels not open. On the 31st there was great prostration; the pulse was intermittent, frequent and there was fæcal vomiting; indeed, death seemed fast approaching. Ordered plenty of strong beef-tea and six ounces of brandy in twenty-four hours, and one ounce of belladonna ointment spread on a large poultice to be applied over the abdomen, and repeated frequently. Great emaciation had taken place in the last few days.

On January 1, he had a large liquid evacuation. There was no pain in the abdomen, though the fæcal vomiting continued. He seemed a little less collapsed. On the following day the bowels were still freely open, and there was no vomiting.

From this time he continued to improve; but on the 5th and the 6th the bowels were not opened, and there was a return of rather severe abdominal pain. Castor oil failed to open the bowels; but the constipation and pain were removed by return to the old treatment of the external application of belladonna and the internal administration of small doses of opium. He left the hospital on January 10.

ERGOT OF RYE IN LOCOMOTOR ATAXY.

M. Grasset, of Montpellier, has lately drawn attention to the fact that ergot of rye administered in tabes dorsalis may do more harm than good. He gives brief notes (*Progrès Médical*, 1883, Number XI), of the case of a man who was the subject of this disease, and who had become much better when he was prescribed ergot of rye in increasing doses from twenty-five centigrammes up to one gramme per day. On the second day of taking the maximum dose he became generally paralysed; the arms, which had never been attacked before, now being involved. Sensation was also much diminished. The ergot was at once left off, and he gradually lost the paralysis; but the ataxic symptoms in the lower limbs persisted. M. Grasset points out that the involvment of the posterior columns is not generally regarded as a symptom of ergotism; but Nothnagel and Rossbach mentioned anæsthesia and motor incoördination among the symptoms induced by moderately toxic doses of ergot of rye or sclerotic acid in animals, large doses producing a state of general paralysis; and he refers particularly to the account given by Tuczek lately on the changes in the spinal cord, particularly in the posterior columns in ergotism. Tuczek's observations were made on eighteen out of twenty-four patients admitted into the Marburg Asylum with mental disease among five hundred who were attacked with ergotism. Four patients died, and examination of their spinal cords threw light upon the spinal symptoms exhibited by all the cases. These symptoms consisted in abolition of the knee-jerk (which returned in those who recovered), paræsthesia, lightning pains, anæsthesia analgesia, ataxy, etc. The lesions found consisted in sclerosis of the posterior columns throughout the cord, in two cases extending to the medulla. The change was symmetrical, and limited to the columns of Burdach. Tuczek endeavored to reproduce these effects in animals by the injection of ergot of rye, but failed. He found, however, that in the rabbit hypodermic injection of sclerotic acid in doses of three to four grammes produced actual ataxy. From this, and from the case he relates, Grasset thinks that ergot of rye should be most carefully administered in locomotor ataxy. In a foot note appended to the paper M. de Bourneville states, that Professor Charcot very often prescribes ergot of rye in tabes, and has never observed any ill-result from it. He gives it in daily doses of twenty-five to thirty centigrammes, but not continuously, the drug being taken for four days and discontinued for two, and so on.—*London Lancet.*

THE TREATMENT OF SPERMATORRHŒA.

Obstinate cases of spermatorrhœa and frequent nocturnal emissions constantly come under the care of the practitioner. Too frequently the medical man consulted simply tells the patient that, if he break off the pernicious habit of masturbation, which has probably originated his malady, he will soon quickly recover. But, in fact, in most cases, the habit has already been abandoned before he comes to seek advice; and these cases do not get well for months or even years afterwards, unless proper measures be taken. Knowing that he has left off this bad habit, and that he neverthless does not improve, his complaint being made light of by the regular practitioner, and being greatly depressed in mind, he seeks the advice of the quack, who is always ready to benefit by these cases. I will give an outline of the treatment I have followed, and which I have found most successful in several such cases. The treatment should be—(1) moral; (2) hygienic; (3) medicinal. (1) Moral. (*a*) The pernicious habit of masturbation, which has probably been the origin of the complaint, must at once be discontinued, or no good can result from any treatment. (*b*) The thoughts should be directed from himself by his having regular work and exercise. (*c*) The anxiety of mind which ensues should be allayed as much as possible, and a happy state of mind instituted. (2) Hygienic. (*a*) The patient should have regular but not excessive mental employment, and bodily exercise in the form of walking, riding or outdoor sports and games. (*b*) Cold sponging of the genitals night and morning for some minutes, or as long as can comfortably be borne, is a most important agent in giving tone to the relaxed organs. (*c*) The patient should have a hard mattress, and as little and as light clothing as possible at night. Care should be taken not to lie on the back, which may be prevented by wearing a knotted towel over the spine, or by some other device. (*d*) No quantity of liquid should be taken before retiring to rest, and the bladder should be emptied the last thing. (3) Medicinal. A mixture containing tincture of perchloride of iron and tincture of nux vomica should be given twice or three times a day; also a pill containing a fourth or a third of a grain of extract of belladonna with three grains of camphor should be given at first every night, and then every other night, immediately before going to bed. If these lines of treatment be adhered to, the patient, whether suffering from real spermatorrhœa or simply from frequently returning nocturnal emissions, will steadily improve, and the emissions will occur less and less frequently, till, in the course of a few weeks, or possibly months—for a malady of a long standing (as this usually is) is never cured immediately—they will cease altogether, or only occur at such intervals as may be deemed normal, and in which there is no harm whatever.—Dr. Taylor in *British Medical Journal.*

A CLINICAL STUDY OF THE ACTION AND USES OF CAFFEINE AND CONVALLARIA MAIALIS AS CARDIAC TONICS.

Until very lately, many of us were accustomed to regard digitalis as the essential, nay, almost the only real stimulant or tonic of the heart. True it is, we consider alcohol a powerful stimulant, and incidentially recognize that it gives the heart renewed power.

In ether and ammonia, we have also diffusible stimulants of considerable value, but their action is evanescent, and is not to be relied on if a continued or specific effect upon cardiac contractability is required.

In iron, quinine, and nux vomica, or its alkaloid strychnine, we have three very powerful corroborants. They restore appetite, make blood of better quality, add to muscular vigor, and rehabilitate, in a notable degree, the general system.

In coca, also, we have a powerful stimulant to the economy, that frequently will strengthen or give tone to the nerves in a rapid manner, that no other drug with which the author of the paper was familiar, can accomplish.

In belladonna we have the only drug which has hitherto taken the place, even in a moderate degree, of digitalis in its direct tranquilizing, and at the same time, strengthening effect upon the heart. But belladonna appears to influence especially the cardiac plexuses and intra-cardiac ganglia, and to give immediate power to cardiac muscular fibres, as digitalis does.

Within the past year, two new drugs have claimed our attention as cardiac tonics: caffeine; and *Convallaria maialis*, or its glucoside, convallamaria. The object of the paper was to present what was actually known in regard to the nature, action, and use of these agents, and also to accompany this with records of some personal cases, and the obvious deductions which can be made therefrom.

Caffeine, or citrate of caffeine, as it is improperly termed, is no new remedy, but not until after the labors of Gubler and other therapeutists was the attention of the medical profession specially directed to it as a cardiac tonic and regulator. Over digitalis it has certain evident advantages: (1) It has no tendency to cumulate in the economy, and hence to occasion poisoning effects. (2) It acts with greater rapidity than digitalis. In cases of asystolism when life is imminently endangered, this property may be of great value. (3) It rarely or never disagrees with the stomach. Four illustrative cases occurring in the practice of Dr. Robinson were then cited in detail.

The second part of the paper was devoted to the Lily of the Valley, or *Convallaria maialis*. This drug had been known for many years, especially its purgative quality, which was similar to aloes and scammony. The conclusion of Ott, in his investigations upon the physiological action of *Convallaria maialis*, were given in full, together with a synopsis of the views of the principal previous writers on the subject. Dr. Robinson then detailed his personal experience with the drug as a cardiac tonic, and gave the detailed histories of eight cases in which cardiac debility was a marked symptom.

Convallaria, possibly, was a stimulator of the cardiac muscles in its first period of action, whilst its after-effect may become of a paralytic order. Further, it is, after the manner of digitalis, a stimulator of the medullary inhibitory centres. In this latter action, no doubt, resides its special power to control dyspnœa and the symptoms of purely functional heart disorder, particularly paroxysmal palpitation and rapid and irregular heart action dependent upon debility (Trideau). It was further probable that *Convallaria maialis* is more potent in its action upon the pneumogastric trunks than it is in its direct influence over the cardiac muscular fibre.

A summary of cases seemed to show:

(1) In caffeine and convallaria we have two efficient heart tonics.

(2) Diuretic action of caffeine is more marked than that of convallaria.

(3) Convallaria is well borne by the stomach of most patients suffering with chronic cardiac disorders.

(4) When not well supported, rejection of medicine by the stomach is probably due to the uræmic condition already commencing.

(5) As cardiac tonics, it is difficult, as yet, to assign a decided superiority to either of these drugs, they both giving increased cardiac power.

(6) Cumulative effects do not occur from their continued use during a period of ten days or more.

(7) Their power of restoring the rhythm to the cardiac pulsations and increasing the bulk of urine is not equal to that of the infusion of digitalis.

(8) In the latter drug we have still the most efficient heart tonic and regulator which has been discovered.

(9) Digitalis is a more powerful diuretic than caffeine.—Abstract of paper by Dr. Beverly Robinson in *Medical News.*

CASCARA SAGRADA IN CONSTIPATION.

J. Fletcher Horne, F. R. C. S., writes: "*Cascara Sagrada, Rhamnus purshiana,* is a small tree indigenous to the Pacific coast of North America. The fluid extract I have used is that prepared by Parke, Davis & Co., Detroit, and procurable of their agents, Messrs. Burgoyne, Burbidges & Co., London. Its use, in my hands, seems to be indicated in almost all cases of constipation, particularly in cases of torpidity of the liver, with scanty dry stools and indigestion. It seems to act as a stimulant to the muscular fibres of the intestines, through its action upon the sympathetic nerve, this increasing the vermicular movements of the intestines, thus resembling nux vomica. I have used it in several cases of obstinate constipation with very satisfactory results. I generally give twenty drops three times a day in sweetened water for ten days or a fortnight; and then, gradually reducing this dose, the patient is able to establish a habit of regularity. Given in doses of a teaspoonful, it acts as a gentle purgative, without producing any griping tenesmus or nausea; but its action is slow, and, in this sized dose, seems to lose its good property of curing the constipation. With children, with smaller doses, I have had equally good results."—*British Medical Journal.*

CHIAN TURPENTINE IN UTERINE CANCER.

Dr. Holland (*British Medical Journal*), after giving this remedy a thorough trial, comes to the following conclusions:

It is pretty generally known in the professional and lay society of England, that Chian turpentine was introduced to our notice by Mr. Clay, of Birmingham, as a specific for cancer of the uterus, and that from the first, preconceived prejudice almost excluded anything like a fair and patient trial of the vaunted virtues of this old Ægean drug. Chian turpentine, however, became in great demand, scarce, and dear, no two obtainable specimens being alike; and in this chaos of circumstances, it was a reasonable assumption on the part of Mr. Clay, that the reported failures of the drug were owing either to its fictitiousness, or to our imperfect method of administration; and, as I had previously treated a series of cases with a variety of specimens, I considered it would be best to repeat my observations with the essence of Chian turpentine of Mr. Clay's pharmacy, and of his own apothecary's preparation. This second series of cases were appropriated as they presented themselves; and, with one exception, were so well advanced that no competent person could entertain the least doubt of their malignant nature. The essence was administered alone, or in association only with its local application as an ointment (one ounce of vaseline to half a drachm of Chian turpentine), and it was pressed from one to three months; no surgical operation being in the meanwhile allowed.

It is a well known fact amongst gynæcologists, that syphilitic disease of the uterus occasionally so closely mimics malignant disease that the diagnosis can be alone effected by a reference to specific treatment; and, consequently, where the history revealed any doubt, the case was at first treated by iodide of potassium, and the Chian turpentine subsequently persevered in with only such intermissions as its irritant effects necessitated.

None of the cases were cured; none had their invading progress decidedly arrested. One case, caught in the most initial state—a few small epithelial granulations—progressed steadily week by week, under the eyes of a dozen interestd observers, in spite of the regular administration of the Chian essence and the local application of the ointment by tampon. Some patients for few weeks reported themselves as better, and appeared more cheerful; one especially was noted as returning quite hilarious after a week's trial of the new remedy; half believed that the pain and hemmorrhage were less, but, on more close investigation, the greater or less amount of bleeding was found to be correllative with the greater or less duration of horizontal rest, especially at the menstrual nisus.

In my first series of cases, the Chian turpentine appeared to mitigate pain, moderate hemmorrhage, and to temporarily create a more hopeful and brighter condition; but, in the second series, these desirable effects, *cæteris paribus*, were less and less apparent, and, therefore, it has failed to reveal to me any quality of specificity in pronounced uterine cancer.

In the weary treatment of malignant disease, whether of the uterus or mamma, in both public and private practice, the drug retains some popularity, and there is no reason why it should not be countenanced as the solatium of a forlorn hope to a desperate sufferer—always bearing in mind the probability of strangury when it is applied locally to the uterus, and of eczema when it is applied to the mamma.

The wisdom of the profession regards cancer as a disease of inherent lethality, evincing the greatest variety in its evolution, natural progress, and decay; and that as yet, and probably for ever, the only remedy it can countenance, as a possible cure, is early and complete extirpation. On the other hand, there are many advanced cases of uterine cancer where surgical operations, once, twice, thrice, or even five times repeated, may be resorted to with a relief of immediate suffering sufficient to justify such procedures in the opinion of the most conscientious of operators.

EXTIRPATION OF THE GALL-BLADDER.

Dr. Langenbuch, of Berlin, has added to the triumphs of modern surgery by successfully removing, by operation, the gall bladder for chronic cholelithiasis (*Berliner Klinische Wochenschrift*, Number XL). The idea that this organ could be removed without endangering life was supported by its known congenital absence in some cases, and by the fact that elephants and horses do not possess the receptaculum for bile. The practicability of the operation was tested on the dead body. The value of the procedure as a remedy rests on the teachings of modern pathologists (Frerichs, Schüppel) that the gall-bladder is the seat, *par excellence*, of the formation of biliary calculi. The necessity for such surgical interference was thought to be proved by the occurrence of cases where the individual seemed to pine away, simply as a consequence of repeated pain, even under the influence of morphia, and of dietetic and other modes of treatment. Further the insiduous manner and manifold directions in which gall-stones may migrate must be borne in mind. Dr. Langenbuch having thus thought out and worked at the subject, an opportunity for putting his conclusions to a practical test was not long wanting. A man, aged forty-three, who had been greatly reduced in health, strength, and flesh by repeated attacks of biliary colic, consented to become the first on whom the operation of extirpation of the gall-bladder should be performed. A T-shaped incision through the layers of the abdominal wall, the cross-piece corresponding to the lower border of the liver, and the vertical part being parallel with the outer border of the right rectus abdominis, was first made, and the peritoneal cavity laid open. The gall-bladder was then seen, its duct found and ligatured by catgut, and the bile drawn off from the bladder by a Pravaz's syringe; the organ was then carefully dissected off the under-surface of the liver. We have not thought fit to give the details, because a surgeon wishing to do the operation would, or ought to, first practice it on the dead body. In Langenbuch's patient there was a little venous bleeding from the under-surface of the liver; this was stopped by catgut ligature, and caused no trouble. There was apparently no escape of bile into the peritoneal cavity. The patient did extremely well after the operation, and, in fact, recovered without any bad symptoms, if we except a little dry pleurisy on the fourth day. There had been no return of pain up to the middle of November, and the patient had gained very considerably in strength and weight. It may be mentioned that there were only two gall-stones, each of the size of millet-seed, in the gall-bladder, and that there was some difficulty in getting an action of the bowels after the operation. So far as we know, this operation has never been previously carried out or even suggested. The surgery of the gall-bladder seems to have been limited to dilitation of fistulæ and the extraction of stones, with the opening of abscesses. *A priori*, it might have been thought that the excision of the gall-bladder would not have influenced the production of gall-stones. It might have been argued that there was a vice in the bile secreted which led to the crystallisation out of biliary calculi, this habit no doubt being favoured by the existence of places wherein it can stagnate, and where it may meet with agents (*e. g.* mucus) which would tend to separate its elements; and these considerations may serve to explain a good result, such as we record. It need not be said that the future history of Dr. Langenbuch's case will be looked for with great interest. The operation will probably only be called for in a small minority of cases, and at all events, should not be practised until all other measures have failed.—*Medical Times and Gazette*, December 9, 1882.—*Practitioner*.

REDUCTION OF DISLOCATIONS OF THE THIGH.

In cases where reduction of the femur by manipulation in the usual way, with the aid of anæsthetics has failed or is inaplicable, and as a substitute, in many cases for anæsthesia, assistants, and mechanical power, Mr. Kelley proposes the following methods:

For Posterior Dislocations.—The patient is laid prostrate upon the floor. Three strong screw-hooks are inserted into the flooring close to the perineum and each ilium of the patient, and to these hooks he is secured by strong bandages or rope. The injured thigh is flexed at right angles to the patient's body; the foot and lower extremity of the tibia are placed against the perineum of the surgeon, who, bending forward, with the knees slightly flexed, passes his forearms behind the patient's knee and grasps his own elbows. Reduction is now accomplished by drawing the femur upwards; but circumduction may also be practissed; the surgeon, stepping backward, then extends the limb, and lays it by the side of its fellow. In sciatic dislocations in order to liberate the head of the bone from the foramen, a bandage may be passed around the thigh, close to the trochanter, by which an assistant may make traction.

For Anterior Dislocations.—The patient is placed upon a table of such elevation as to have his pelvis nearly as high as the trochanter of the surgeon. A bandage around the pelvis, and secured to the side of the table farthest from the dislocation affords counter-extension. The surgeon, with his face directed towards the dislocated joint, and standing on its inner side, with his trochanter pressed against the femur, now bends the leg behind his back, and grasps the ankle with the corresponding hand. Reduction is effected by rotating or turning his body partially away from the patient, thus making traction on the femur in the most favorable direction, and at the same time pressing its head towards the acetabulum with the disengaged hand.—*Dublin Journal of Medical Science*, October, 1882. —*Practitioner.*

FERROCYANIC TEST PELLETS AS CLINICAL TEST FOR ALBUMEN.

Dr. F. W. Pavy communicated to the Clinical Society, February 9, 1883, a paper, of which the following is an extract:

Yellow prussiate of potash and acetic acid, employed together, have long been known to furnish a valuable test for albumen. Citric acid may be made to take the place of acetic acid, and thus a test capable of being kept and used in a solid form is supplied. The precipitant of the albumen is ferrocyanic acid, and this is liberated just as effectually by citric as by acetic acid.

Acting under Dr. Pavy's directions, Mr. Cooper, of 58 Oxford street, London, W., has produced a pellet which seems to supply all that can be desired. Its components are the sodic ferrocyanide, and citric acid. Grounds exist for the employment of the sodic instead of the potassic ferrocyanide. All that is necessary in using the pellet is to crush it to a powdered state, within a folded piece of paper, with a silver or other coin from the pocket, or in any other way that may suggest itself, and to run the powder into an ordinary sized test-tube, and pour in the urine to be examined to the height of about an inch. On simply agitating freely, without application of heat, a precipitate will immediately, or almost immediately, appear when albumen is present. The test is so delicate, that the smallest amount of albumen gives rise to a distinctly recognizable opalescence, and with a larger quantity a dense white precipitate is produced. Instead of crushing the pellet it may be broken in half, or placed in a whole state in the urine. Used in this way it takes it a minute or so to be dissolved, and the reaction to be produced.

An estimate may be formed of the amount of albumen present by allowing the precipitate to settle, and reading off its height in proportion to the contents of the tube, in the same way as is done after the application of heat. As no employment of heat is required in the application of the test it is not necessary that a test tube should be used. A wine-glass or medicine-bottle will answer instead, and the quantity of urine should be kept down to about that recommended when a test-tube is used. Enough acid exists in the pellet not only for liberating the ferrocyanic acid from the ferrocyanide, but for more than neutralising the alkalinity that is likely to belong to a specimen of urine limited to the quantity which has been recommended to be taken. Through this circumstance the test acts equally as well with alkaline as with acid specimens of urine.

Phosphates do not interfere with the validity of the reaction given by the test. They not only are not liable to be precipitated by it, but the acid present will promote the solution of the phosphates already deposited. Should the urine be turbid from lithates, it must be cleared by warming before the test is employed. A number of ways in which this can be done will readily suggest themselves, without recourse to the use of a spirit-lamp, where no spirit-lamp happens to be at hand.

If thought proper, the test may be used in the same manner as some persons are in the habit of employing strong nitric acid—viz., by bringing the specimen and the test into contact with each other without admixture, and looking at the line of junction for the precipitate. Thus used, the pellet should be dissolved in a little more than sufficient water to cover it, and the urine then allowed to flow gently down the side of the test-tube until a stratum of about half an inch in height has collected. The lamina of precipitate which is formed from specimens containing a minute amount of albumen comes out denser and more sharply defined than with nitric acid. Further, if the contents of the tube be afterwards shaken together, a diffused precipitate is visible; whilst in the case of the strong nitric acid the precipitate disappears. With urine containing oleoresinous matter, consequent upon the administration of an oleo-resin medicinally, it is known that nitric and other acids occasion a precipitate. The same will naturally occur with the ferrocyanic pellets, and this is the only fallacious indication that Dr. Pavy is at present aware belongs to the test. Error from this cause, whenever the conditions permit it to be presented, must be guarded against in the same way as has been hitherto done under the employment of nitric acid.—*British Medical Journal*, February 17, 1883, page 308.—*The Dublin Journal of Medical Science.*

NOTES ON THREE DRUGS.

Briefly I shall mention three materiæ medicæ and their uses. (1) Powder of capsicum, two drachms to the ounce of prepared lard, rendered elegant by the addition of one of the essential oils, is a seldom-failing local application in subacute and chronic forms of rheumatism. It must be rubbed over the affected part for ten minutes by a gloved hand, and the application of dry heat intensifies the rubefacient action, which continues for a considerable time afterwards, being even somewhat revived by heat or walking. It is to be used freely night and morning, or at bedtime only (in lumbago, for example, the first thorough application often gives marked relief), according to the effect produced on the sensibility of the patient, and on his disease. (2) A year and a half ago I published a note in a contemporary journal in reference to the antiseptic treatment of what are called the zymotic diseases (I trust we shall soon be naming them the protistozooic diseases), mentioning the administration of carbolic acid in scarlatina; but I have since then, with more advantage, used the benzoate of ammonia as my germitox (a word meaning germ-poisoner better expresses the idea of the various degrees of antiseptic action than a term meaning germ-slayer). In doses of fifteen grains every three or four hours to an adult, and proportionately for children, it is an efficient treatment in scarlatina anginosa and milder forms, combined or not with liquor ammoniæ acetatis. I have been informed, by a friend, of its uncombined exhibition in an apparently hopeless case of scarlatina maligna, where recovery followed. (3) Syrup of the protochloride of iron, in drachm doses thrice daily, diluted with water, recommended, I believe, by Professor Fraser, of Edinburgh, I have seen to be of great benefit particularly in the anæmia of young females. It appears to me to take rank with, if not, all things considered, over, the famous Blaud's pill. (A. Drummond Macdonald, M. B. and C. M. Edin., Liverpool).—*The British Medical Journal* February, 1883.—*Edinburgh Medical Journal.*

"CONSTIPATION" OF NERVOUS ORIGIN.

There are many diverse forms or causes of this malady—or abnormity of function—which it is important to recognise, but which are too commonly confounded, with the inevitable result of failure in the precise direction of remedies. The following may be noted as two or three of the commonest varieties of the trouble. For example, defect of muscular movement may be the cause of inaction of the bowels. This may be either want of peristaltic action in the small intestines or of extrusive force in the muscles concerned in the act of defecation; the location of the inertia being determinable by the character of the fæces, and the period and manner of their dejection. The characteristics of fæces recently discharged from the small intestines and rapidly passed through the large intestine are too familiar to call for description. The scybalous dejecta of long retained fæces are equally well known. The error—if error there be—which is made in practice relates to the neglect of such lessons as the characteristics of the fæces are intended to teach, in regard to the cause or form of the "constipation." We lay great stress on this matter in diarrhœa, but it is practically disregarded in constipation, whereas, if possible, the character of the dejecta is more suggestive as an indication of the place and cause of detention than as an indication of the nature and cause of excessive or too rapid discharge. It is, for obvious physiological reasons, of the highest moment to determine whether constipation be due to inactivity of the muscular coats of the intestine, or of the levator ani and accessory muscles concerned in the act of evacuation. Second, there may be, and often is, instead of inactivity, irritability of certain muscles as a cause of constipation. In a considerable proportion of cases of constipation with loaded rectum, the actual cause of the retention of the fæces is spasmodic contraction of the sphincter, which occurs the moment the levator ani begins to act. Only a little of the watery portion of the contents of the bowel escapes, the scybalous mass being retained. In cases of this class there is apt to be considerable disturbance of the pelvic viscera and other discharges while at stool. The cause of these muscular troubles is of course located in the nervous system. Sometimes the reflex excitability which should respond to the presence of fæces at particular parts of the intestinal canal is abnormally depressed, as in the constipation which arises from certain tabetic forms of spinal disease. In others the reflex irritability is unduly exalted, as in the cases of spasmodic contraction of the sphincter of which we have spoken. This increased excitability in the lower part of the cord is common, and it is generally to spasmodic irritability of the sphincter those forms of constipation are due in which the use of tobacco affords temporary relief, and seems to produce an action. As a rule it may be assumed that "habitual constipation" is an affection the cause of which must be sought in spinal exhaustion or irritability, or the two states combined. In another group of cases the cause of constipation is inactivity of the secreting glands of the intestines, from defect of innervation. We are not speaking of the cases in which the larger viscera, such as the liver, may be at fault, but of a multitude of instances in which the glandular system and apparatus of the walls of the intestinal canal are not in such a state of erectile and functional activity as to maintain the reflex excitability of the parts, and to so lubricate the contents of the canal as to pass them rapidly along its course. This is *one* of the causes of that broken earth-like type of dejecta which attends a form of constipation common among subjects of spare and shrivelled physique, who are insensitive to most external impressions, though, perhaps, preternaturally sensitive to some special excitants. It is not within the scope of our purpose to discuss this topic in detail, but it is one to which the attention of the profession might be usefully directed. The practice of treating "habitual constipation" by cathartics is almost played out, and it is time the study of this common and most intractable affection .from the standpoint of nervous origin and causation, should be seriously and earnestly undertaken.—*London Lancet.*

MISCELLANEOUS ITEMS.

Surgeon-General Barnes.—This well-known medical man died April 5.

Correction.—In the prescription in Dr. Hake's article in our last issue, please substitute *soapniæ* for saponiæ.

Dr. Delattre gives to pregnànt women the phosphate of lime or the syrup of the. phosphates. The mothers feel better and the children are nourished by this treatment.

Picric Acid in Erysipelas.—Dr. Flaminio Tassi of Siena, has used a saturated solution of picric acid in the treatment of four cases of erysipelas. It was painted on with a brush over the inflamed part. It appears to have a beneficial action, but the number of cases is too small to enable any definite opinion as to its therapeutical value to be formed as yet.—*L'acido picrico nella cura dell 'erisipela* (pamphlet), Torino, 1881.—*Practitioner.*

Mercury in Intestinal Constriction.—From an examination of a large number of cases, Bettelheim has come to the conclusion that the use of mercury in bulk (200 grammes as a dose) is by no means a worthless remedy. On the contrary it sometimes saves life in cases of obstruction of the intestine, not yielding to other means, which are due to fæcal accumulation, ascarides, twisting or introsusception; and no injury and especially no perforation of the intestine is caused by it. He therefore recommends that after the use of the ordinary means, such as moderate doses of laxatives, opiates, irrigation of the intestine, changes in the position of the patient, electricity and massage, mercury in bulk should certainly be had recourse to without fear.—*Deut. Archiv f. Klin. Med.* page 53, Volume XXXII.—*Practitioner.*

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ORIGINAL ARTICLES.

NOTE ON THE MICROBES OF BLENNORRHAGIA.*

BY DR. FREDERICK EKLUND, STOCKHOLM, SWEDEN.

It is an incontestable truth that exact histological and pathogenic notions are indispensable conditions for the healing of disease, as well as for instituting efficient measures for its prevention. The disease now under consideration is no exception to this general rule.

For the purpose of throwing some light on the essential nature of the blennorrhagic virus, I performed a systematic series of microscopic examinations of blennorrhagic pus, and also of the superficial layer of the mucus in the navicular fossa of the urethra. I removed this superficial layer from the subjacent mucus by means of the very slender and sharp handle of a knife for microscopic dissections. This I introduced into the canal of the urethra to the depth of about two or three centimeters. By means of fine needles I spread a part of a drop of the matter thus obtained upon the centre of an objective. I then studied the preparation in its most natural state, for I know by experience that many of the devices usually employed, for example, the warming of the preparation, give only false and misleading results. Sometimes I added a solution of different aniline colors in acetic acid; for example, fuchsine, green, brown, or aniline violet, eosine, dahlia, hematoxylene, carmine. I consider this series of researches of sufficient extent, both as to the number of cases and duration of time, to justify the general law that is deduced from the description to be given hereafter.

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*This article was sent to us by the author in French manuscript, from which the translation has been made by Professor W. H. Payne, of the University of Michigan.—EDITOR THE PHYSICIAN AND SURGEON.

In the first place, I found gonococci constantly present, which Neisser, W. Watson Cheyne, and Bokay have accurately described. The micrococci, whose diameter varies less than from 0.1 to 0.5 millimeters,* glisten like pearl. Most of the round pus cells are completely filled with them, while the intercellular fluid absolutely swarms with them. They are seen in rapid motion, either rotatory, whirling, or oscillatory. It is not rare to find them united in pairs in the form of the figure (8), a proof, according to Neisser, that their multiplication takes place by bifurcation. They may be readily tinged with aniline violet, and it may then be observed that the gonococci in question are plain, flat disks, and not spherical balls, as only the edges of the disks, and not their surfaces, are affected by the aniline. However, I am wholly unable to accept the opinion of those who think that the micrococci in question represent exclusively the specific microbes of blennorrhagia; for I have found similar, and probably identical bodies both in acute and chronic ulceration of the intestines and the lungs, and in stomatitis attended with ulceration. In general, it seems to me that the office of these micrococci is to produce acute inflammations attended with desquamation of the epithelial cells, the formation of round pus cells which in turn are invaded by the micrococci, and also of ulcerations either superficial or more profound. In a word, these micrococci represent the sappers and miners of pathology.

For a long time I had observed that in case of acute blennorrhagic cystitis, the pus cells of the bladder were provided with appendages, either filliform, veined, or bud-shaped. At that time I was wholly unable to solve this obscure enigma; but my repeated microscopic examinations of blennorrhagic pus have contributed somewhat to the elucidation of this enigma. The pus and the superficial exudation of the inflamed mucus of the urethra, obtained in the manner first described, contain, without exception, a very beautiful net-work of myceloid filaments which I will describe below. The principal filaments of the microbe in question, which I name *Ediophyton dictyades* (Αἰδοιοφύτον δικτυοειδὲς), have a transverse diameter of exactly one millimeter, and are perfectly clear and transparent. These myceloid filaments are inosculated into a continuous plexus at angles of all degrees and with meshes of every form Still a common characteristic of the *Ediophyton dictyades* is that the myceloid tubes here and there exhibit net-works full of distensions, the boundary lines of which are either regular or very sinuous. This porosity, common to mushroom growths of all varieties, is due to the tendency to propagate by the simultaneous and very rapid lengthening of a countless number of myceloid filaments, or of fragments of their secondary ramifications which grow in profusion along the superficial layer of the mucus, and penetrate the glands of Littré and of Cowper and the lacunæ Morgagni, whence they appear in the intercellular meatus and in the cells themselves. It is an exceptional case when this microbe, like that of diphtheria, penetrates sufficiently to produce a general infection. The most natural explanation I can give of this fact is twofold. First, the fibrous and firm coat that incloses the mucous of the urethra, forms a solid rampart which prevents the advance of this myceloid growth in this direction. In the second place, the power of resistance in the human organism is at its maximum at the period when man contracts blennorrhagia. As a rule, also, the myceloid growth of the *Ediophyton dictyades* spreads most rapidly along the mucus surface of the urethral canal, the base of the bladder, the ejaculatory ducts, the seminal vessiculæ, the ductus deferens, the coni vasculosi, the vasa afferentia testis, and finally, perhaps the tubuli seminiferi recti. If the infection becomes general, the gonococci of Neisser and the *Ediophyton dictyades* constitute the infectious substances. In case of blennorrhagia of the lungs from native blennorrhagic infection, I have proved the presence of the gonococci of Neisser, both free, and filling the pus cells, and also of the *Ediophyton dictyades*, in the matter expectorated.

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* Verick, eye-glass number two, objective number eight.

It is easy to understand the acute congestion and violent inflammation of the mucous membrane produced by the simultaneous and ever increasing suction of all these myceloid branches. Acute miasmatic pneumonia, as it is seen in these northern countries, affords, by analogy, a very striking example of this. By microscopic examinations I have found the matter expectorated filled and interwoven with a plexus containing myceloid tubes of extraordinary length, double contours, glassy, which extend in long parallel courses and inosculate with one another. These same microbes I collect on occasion by cultivating masses of dust that accumulates upon the cupboards and the furniture of my old and infected rooms, upon slices of cooked potatoes. These microbes are developed with astonishing rapidity in presence of favorable conditions, namely: moisture, warmth, and a suitable nutrition.

Since the *Ediophyton dictyades* appears under two forms, radically distinct, yet actually combined; and since the investigations as to the origin of the two varieties make it evident that the form (α) is derived directly from the vegetable kingdom, while the form (β) is best developed in presence of animal matter in a state of putrefaction, I think it best, for clearness of exposition, to describe a little more in detail the two different forms (α and β) of the *Ediophyton dictyades*.

Ediophyton Dictyades.—(α)—The myceloid filaments have the delicate tint of mother of pearl, and, very irregular themselves, form networks whose meshes have the most varied forms, as the myceloid tubes, unicellular and without septa, inosculate at all possible angles. All the myceloid filaments have secondary ramifications which in turn propagate a third growth, and so on without limit as to form and number. The length of these filaments is very variable. The finest tubes form networks whose meshes are scarcely visible. Thus it is to be observed that these myceloid filaments are torose either as they form lateral sacs, almost round, but which must not be taken for cavities properly so called, since they form only sinuosities on one side or the other of the myceloid tubes, from which they are separated by no positive line; or as the myceloid filaments, in absorbing mucous liquids, swell out in all directions and in every variety of form. Quite often these knots reach a transverse diameter of nine millimeters or a little more. A violet tint may easily be given these knots by a solution of hematoxylene, or a blue by a solution of aniline green, or a red, by eosine. Another mark which characterises the form (α) of the microbe in question, is the production of innumerable micrococci of the common sort upon the sides of the myceloid filaments, like the acaulous fronde of certain plants. But these micrococci properly so called are not at all identical with the *gonococci* of Neisser, first, because they exhibit no movement, and secondly, because it is never observed that the pus cells in which these myceloid filaments are enrooted, as I have just described, are infested with the gonococci. It is altogether probable that these micrococci in general give rise to the myceloid tubes. If the latter invade the pus cells, it is observed that they are provided with filiform appendages of a length reaching even to nine millimeters and over. Sometimes I have observed a very long myceloid tube tilting from side to side and a pus cell suspended from it.

If during the heat of dog days, when the waters of lakes and the marshy shores of the sea are covered with what is called seminal dust,* a flask be filled with this water, carefully corked, and then exposed to the heat of the sun till spontaneous decomposition sets in, there will be observed among the vegetable debris that have begun to develop a plexus of myceloid filaments closely resembling the *Ediophyton dictyades*. This putrescent water, when used for drinking, as in milk when diluted, or when drawn from cows that have taken up this decomposing matter while grazing, gives rise to slight cases of dysentery called summer diarrhœa, which are a sort of diphtheria of the mucous membrane of the intestines; while in other cases, the stools contain principally the microbes of typhus, or all sorts of the bacteria of putrefaction. These are so many proofs that the hygienic conditions are, if possible, even worse in summer than in winter, and that the neglect and the contravention of the most primitive hygienic laws have reached their point of culmination. At the time of the alvine evacuations, not only the perinæum, but even the vulva itself is overspread with liquid fecal matter. If this is not removed by washing, the microbes previously mentioned gain a lodgement and become developed as they ascend the mucous surface of the vaginal canal, when they produce a slight diphtheria, that is, what is called spontaneous blennorrhagia.

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*Anabæna circinalis, of the Nostoc family.

EDIOPHYTON DICTYADES.—(α)—This form is characterized by the very regular course of the extended myceloid tubes, either rectiliner, or curved in arcs of various forms and dimensions, in consequence of which the meshes of the net-work are, as a general rule, very large, and present forms that are quite uniform, as squares, rectangles, circles, ovals, etc. So the knots of the myceloid tubes are much larger and more uniform, but the production of micrococci is comparatively less, and the secondary ramifications are perhaps somewhat less than in the case of form α. Again, the form β of the *Ediophyton dictyades* is characterized by the pear shaped, or balloon shaped, forms into which the ends of the myceloid tubes are distended. These expansions have a color bordering on a light greenish yellow, a fact that explains the observed color of blennorrhagic pus. They are readily tinged by a solution of hematoxylene or of eosine. In the case of blennorrhagic cystitis and pyelitis, I notice these ampulæ as the warty appendages of the pus cells. If there be added to the preparation a little acetic acid colored with aniline green, the nuclei of these cells are distinctly seen, all of a blue tint, while the myceloid tubes of the ampulæ, which are only rarely colored by aniline green, are seen to be lengthening a little in the interior of the cells. Sometimes cells of pus are found surrounded by a small plexus of the form β of the *Ediophyton dictyades* that is at the same time rooted in the cells. Finally, the myceloid filaments of the form β are septiferous. Thus, for instance, when two or three tubes are united at any angle whatever, it seems that the point of junction is formed as by a button, or by an isolated part, either in the form of an annulet, itself septiferous, or as an ordinary swelling of the myceloid tubes, but adapted to its purpose, as it were soldered and rough shaped.

It is well known that in the urine of scarlet fever patients and of those who are recovering from this disease are found myceloid filaments, long and transparent. In such urine, left to putrefy in summer, net-works, similar to those of the *Ediophyton dictyades*, begin to develop. It is an admitted fact of every day experience that during convalescence from scarlatina, if the patient makes water and does not cleanse the vulva from the urine, the myceloid filaments contained in it may develop in the vagina and give rise to blennorrhagia, and this the more readily and completely if the patient has been previously affected by a summer diarrhœa and the microbes or the plexus containing them come in contact with those produced by the diphtheria of scarlatina.

In the matter expectorated by patients having the whooping cough, I constantly meet with similar ampulæ, though in no wise identical with the terminal vessicles of the *Ediophyton dictyades*, together with very long *bacilli*, twisted in spirals, *micrococci*, etc.

In the blennorrhagic pus of women, the same microbes that I have just described are constantly met with.

Since in all my microscopic examinations of the pus and of the superficial layers of soft chancre I meet with micrococci and pus cells filled with micrococci, all perfectly identical with the gonococci of Neisser, and also with the plexus of the *Ediophyton dictyades* α and especially β, I must conclude that the virus of soft chancre and of blennorrhagia are identical. It is only the different parts affected, in one case the mucous surface of the urethra, in the other the derma, that make the difference, save that for the production of a soft chancre a lesion in the continuity of the flesh is an indispensable condition, while the gonococci of Neisser and the *Ediophyton dictyades* have inherent vital force enough to invade the mucous surface of the urethra while intact.

The microbes of balanoposthitis consist of vibriones from putrefaction, short, very active, and squirming, together with *bacilli*, long, slender, and straight, that constitute the agents of butyric fermentation. Women are quite often affected with purulent colposis which exhibits all the appearances of blennorrhagia. On examining with the microscope the yellow pus that is found accumulated abundantly in the posterior cavity, we find an abundance of such vibrones as I have just mentioned. These vibrones, which are most readily developed in contact with decomposing animal matter, give rise to very grave septic peritonitis.

I have also made some experiments for the purpose of studying, without the aid of the microscope, the influence on blennorrhagia of several therapeutic agents in general use. The common liquid injections, for example, a saturated solution of boracic acid, have not the least effect either upon the gonococci or upon the *Ediophyton dictyades*. A solution (1:100) of nitrate of silver has no visible effect on the microbes in question. After the copious addition of an aqueous supersaturated solution of corosive sublimate (1:10) to the preparation, the gonococci continued for several hours their rotatory, twisting, and oscillatory movements. After some time the movements ceased but the *Ediophyton dictyades* were not the least affected by the supersaturated solution above mentioned. After the direct addition to the preparation of a drop of the extract of the *Eucalyptus globulus*, the movements of the *gonococci* ceased, but I have grave doubts of the complete destruction of their power to multiply. I have very fine preparations of the *Ediophyton dictyades* kept in a solution of iodoform in extract of eucalyptus globulus (1:10), and also in corrosive sublimate (1:10); and for these reasons I am forced to doubt the power of these two solutions to prevent the development of the *Ediophyton dictyades*.

I have succeeded in curing my patients by employing, after the disappearance of the acute symptoms, cold sitz baths and at the same time injections of carbolic acid (1:600), chloral hydrate (2:300), and a medication in earth of balsam of copaiba and berries of cubebs (le baume de copahu et les fruits de cubèbe en mèdication in terre). By microscopic examinations, continued daily, of the urine of a convalescent from blennorrhagia, I have proved that the *gonococci* were the first to disappear from the urine, a strong proof of their parasitic nature.

The *Ediophyton dictyades*, and the pus cells which derive their appendages from them, either of the form (*α*) or of the form (*β*) are very difficult to dislodge; but persevering in the use of the cold sitz-baths, every vestige of these microbes disappeared, and normal epithelial cells were reproduced.

The species *Ediophyton* has not yet a place in our classification. It is evident that it can be referred neither to schizomycetæ nor to the hyphomycetæ, but it forms a transition or an intermedium between two these classes.

CONCLUSIONS.

(1) *Diagnosis.*—The elements of the diagnosis of blennorrhagia consists of the proof, by microscopic examination, of the *gonococci* of Neisser and of forms (*α*) and (*β*) or the *Ediophyton dictyades* in the pus under examination.

(2) *Prophylaxis.*—(*a*)—Assiduous cleanliness of the genitals of infants, especially of girls, from the period of nursing. (*b*) Preach the Gospel so powerfully to the young that they will feel that any affection of the flesh is a horrible enemy of the living God. (*c*) In case of infection, a thing always to be deplored, introduce as soon as possible into the urethral canal, to the depth of from three to six centimeters, bougie annointed with carbolic acid and consisting of iodoform thirty centimeters, extract of eucalyptus globulus ten drops, butter of cocoa 2.5 grammes. This medicated bougie is either left to liquify, or the excoriations may be treated with this solution applied by means of a brush.

(3) The prognosis is greatly facilitated by the ease, rapidity,

certainty and completeness with which the microbes in question are eradicated.

(4) The remedy recommended by Dr. W. Watson Cheyne,* namely bougies having the formula first mentioned, is worthy of a trial. If it succeeds poorly, hydrotherapy will cure the patient.

HOW DISEASES ARE CONTRACTED AND COMMUNICATED.†

BY L. S. ELLIS, M. D., MANISTEE, MICHIGAN.

The medical practitioner now-a-days is confronted by questions and their solutions, widely differing from those of former times.

The time is past when a Divine Providence can be made to shoulder consequences when they properly belong to human hands.

That lucky day for doctors has gone by, and now we are met by the question—"Why this result follows natural causes?—natural they must be whether known, surmised or concealed."

When an epidemic visits a country or community, rather than call it a visitation of God, people are beginning to look for a legitimate cause—a cause which gives effects as surely as seed-time brings the harvest, and a harvest indeed it is, gathered in by a ruthless reaper.

When yellow fever rested as a scourge upon New Orleans and Memphis, there were causes to search after, and an eager humanitarianism does not and will not rest so long as the mysterious agent is not fully found out.

When diphtheria played such havoc at Ludington, there were natural causes, none the less real and potent if obscure or purposely hidden away.

For more than a century past, the great points of the religious pilgrimages of the East, have been the starting points of the cholera, which has caused such havoc over the world. It began its terrible march of devastation with the religious pilgrimages of Mohammedanism, and meeting with the caravans of commerce was spread step by step over the civilized world. Investigation showed that the holy well from which all must drink was the manifest source of all this fatal waste. The accumulated filth of ages was periodically drank by ignorant and superstitious humanity, and humanity paid the penalty—fell a victim to a powerful and obvious cause.

These few conspicuous instances are but samples of thousands that are at work continuously and powerfully almost everywhere.

**The British Medical Journal,* Volume II, for 1880, pages 124–125.

†A paper read at the Sanitary Convention at Reed City, April 27, 1883.

But not all causes of disease, either epidemic or sporadic are so easily discovered, and when discovered, the same cause may not always produce like results—indeed it is a well-known fact, that appreciable causes differ widely in their effects, and he who would keep abreast of facts must often review and revise his conclusions concerning the origin of disease. And if it is true that the causes of disease change, it is equally true that the character of disease is changing, and perhaps the mode of communication.

What I have said thus far, has been said in the spirit of times past by—of things that were appreciable to the unaided senses.

But science has come forward, and delved deeper into the mystery. The microscope has brought to knowledge living organisms not before dreamed of in human philosophy.

Very few of us, either as physicians or sanitarians can have opportunities or practical ability for searching for ultimate causes of disease, or discovering and studying bacilli, bacteria or micrococci.

The advantages of Pasteur, Tyndall, Koch, Schmidt, and a multitude of able microscopists does not fall to our lot. Even they are criticising each other's methods, and any progress or alleged discovery is subject to the most destructive criticism and review.

We, as physicians, must meet, as an every-day experience, cases where the question of origin immediately presses itself upon us. By what means was this disease contracted, or how has it been communicated? If we discover a mass or pool of filth about the premises—find contaminated water, diseased or putrid food, or impure air, we think we have causes appreciable to the senses.

Justice Cooley in an address before the Sanitary Convention at Ann Arbor, said what ought to be repeated in every neighborhood: "If a family for a quarter of a century have been accustomed to cast the slops of the kitchen into the back yard, within two or three rods of the well; if a vault without exterior drainage is within convenient distance, and the pig-pen, hen-house and barn-yard as near the house as it is customary to bring them—the physicican, when typhoid fever or some kindred disease makes its appearance in the family, if he is sufficiently intelligent to look beyond the symptoms for the causes, ought to turn his first attention to the excavation from which the family receive the constant beverage, but which is so well calculated to be a cess-pool for kitchen, water-closet, pig-pen and stable. There is probably not a city or a village in the State which has not within it wells which, for the reason indicated, ought long since to have been condemned and filled up. Fevers sometimes go through a family, taking off one member after another, and the unsuspected water of a foul well is both the original cause of the disease, and the insuperable obstacle to a recovery."

How many families have thus been sorely stricken by these very causes existing from ignorance or carelessness. Instances might be multiplied and my time filled up by them, but I should not thereby accomplish what I desire in this paper.

Presumably, whole libraries have been written about bad drainage, imperfect sewerage, contaminated water, unwholesome food and impure air, as causes of disease. Sometimes diseases follow, and sometimes they do not—sometimes apparent causes produce effects and sometimes not. Diphtheria finds its victim in the palace as well as in the hovel. Typhoid fever, splenic or septic fever finds lodgment where least expected, and suggests that these manifest causes are not the ultimate causes—that some other cause may be hidden away from observation.

Those of us who are beginning to carry grey hairs, remember that in our student days (and after), vague, unsatisfactory and contradictory views were held about the methods and causes of zymotic disease, their mode of communication, their period of incubation, and the changes wrought by their presence. But now and then some student with the microscope suggested that living microscopic germs were by their presence the cause, (*fons et origo*) of certain types of disease.

Many a fierce battle has been waged over the germ theory of disease, but the theory has come more and more into the light. A widened discussion and diligent microscopic study has broadened the field, and now wonderful developments and startling hypotheses are constantly pressing for our attention.

I propose now as briefly as possible to look at this germ theory of disease, and then as fully as possible apply it to specific diseases.

In 1838 Schwarm, a Berlin scientist, made the important announcement that if a decoction of meat was effectually protected from the atmosphere, no putrefaction would take place. Because of the defence and denial of this announcement, participated in by eminent chemists of that time, and because the question of spontaneous generation was involved by the discussion, M. Pasteur, a young and eminent French chemist, took the matter in hand, and commenced a series of experiments which has yielded important practical results.

He found that the air we breathe, though nominally pure, and, as supposed, pervaded by inanimate dust, was really pervaded by myriads of organized bodies containing the germs of life. He found that whensoever any animal or vegetable infusion, though previously boiled so as to destroy any life in them, was exposed to air, it became putrid, and swarmed with abundant microscopic life.

A drop of putrid milk swarms with life, and if the minutest portion of it was conveyed to other milk, it too very soon showed vastly multiplied germs of the same character. Here was immediately established the battle-ground of scientists. Pasteur's experiments were repeated over and over again by Tyndall.

He took his flasks and carried them high up on the Alps, that he might escape all possible sources of error, from bodies possibly existing in the atmosphere of ordinary temperature.

As a result, he fully corroborated Pasteur's experiments, and thus it was that the question of spontaneous generation was negatively settled.

As surely as oaks grow from acorns, so surely all minute and microscopic organisms obey the common law of origin —springing from previously existing germs—never growing spontaneously, but always proving the maxim: —"*Ex ovo, omone vivum.*"

Step by step these investigations led to immensely important and practical results. And even now, while so much about this field is being brought to view, surely we are just only on the border land.

The silk culture of France was saved from impending utter annihilation by investigations running in this channel. The diseased worm and its egg were found to swarm with bacteria. One silk worm conveyed it to another. The leaves of the mulberry soiled by the diseased worm gave the disease to the healthy worm that ate it. The egg was infested by the same parasite. The moth also carried with it these living death-germs, and like a plague among men, utter annihilation seemed to await the spinner of silk.

So the wine industry was save by the investigations of Pasteur, who found a similar microscopic organism working destruction to the grape. Here, as in human experience in medicine, a knowledge of the cause led to the remedy.

Few things in science are more interesting or have yielded wider-reaching, practical benefits than the researches of Pasteur in connection with that disease known as anthrax, charbon, or splenic fever. For many years epidemics of charbon had appeared in many parts of Europe, terribly destructive to animals, and when communicated equally destructive to man. It is stated that "between the years 1867 and 1870, no less than fifty-six thousand deaths occurred among horses, cattle and sheep in the district of Novgorod, in Russia, while five hundred and sixty-eight human beings perished, to whom the disease had been somehow communicated."

We all remember what terrible havoc that disease known as the "Siberian Boil Plague" made in different parts of Russia only a few years ago.

In France, the disease is prevalent, and often ruinous in some provinces, and we are hearing of it in our own country over limited areas.

"It is said that a malady which occurs among the woolsorters at Bradford (often proving fatal), is a modification of anthrax communicated by the wool of sheep which have suffered from splenic fever.

As early as 1850, Mm. Rayer and Devaine discovered minute transparent rod-like bodies in the blood of animals which had suffered from this disease.

Koch showed that these bodies are fungoid in their nature, and traced the stages of their existence. Cohn obtained similar results, as did Ewart in England. The growth of the disease—producing rods, as studied under microscopic examination, is as follows:

First, germs of extreme minuteness are seen in the form of simple tubes with transverse divisions; next, minute dots appear, which enlarge into egg-shaped bodies lying in rows within the tubes, and lastly, the rods break up, freeing the ovoid germs.

The wonderful power of multiplication of these germs, almost exceeds belief. Dr. D. E. Salmon says: "We may take one drop of the blood of a fowl that has died of cholera and add it to two thousand times its volume of infusion of the muscles of fowls in a suitable apparatus, and in twenty-four hours the one thousandth part of a drop of this infusion introduced beneath the skin of a healthy fowl will produce the disease with all its virulence. We may go further, and place it with two thousand times its bulk of innocent infusion, and in another twenty-four hours our second cultivation will have the same activity as the first, though the one-thousandth part of a drop used for the inocculation would contain but the one fourbillionth part of a drop of the original blood. We may continue this dilution under the same conditions, as I have done, to the third, fourth, fifth or even sixth cultivation, at which time the amount inocculated could contain but the one sixty-fourth sextillionth part of the drop of the original blood, and still the same virulence remains. There is no doubt then, that the virus reproduces itself."

Such dilution does not in any way impair its potency. Dr. Carpenter says: "It has been shown that the minutest drop of the fluid containing these germs, if conveyed into another portion of cultivated fluid, initiates the same process of growth and reproduction; and this may be repeated many times without any impairment of the potency of the germs, which, when introduced by inocculation into the bodies of rabbits, guinea-pigs and mice, develop in them all the characteristic phenomena of splenic fever. Koch further ascertained, that the blood of animals that succumbed to this disease might be dried and kept for four years, and might even be pulverized into dust, without losing its power of infection."

Thus noting the wonderful power of multiplication of bacteria and bacilli, and the tenacity with which they hold their potency for evil, it becomes of great interest to know about their methods of communication.

The problem undertaken by Pasteur was to determine the mode of communication of splenic fever, or charbon among the cattle, horses and sheep of France.

He found that malignant attacks of charbon often occurred in pastures seemingly perfectly healthy and free from obvious causes of disease. But on further careful inquiry, he found that animals had died there years before, and had been buried there ten or twelve feet below the surface. Then he was persuaded that by some means, the poisonous germs of the malady were brought to the surface from the buried bodies, and thus originated fresh outbreaks of the fatal splenic fever. He found in earth-worms the causes of the trouble, for he inocculated guinea-pigs and rabbits with the contents of the alimentary canal of these worms, and produced in them the severest forms of charbon, and after death their blood was found to be loaded with the deadly bacteria, which in turn produced the disease in other animals.

After discovering this microscopic organism, other modes of communication were soon pointed out. They float on the currents of the air and in clouds of dust; they are carried by insects; multiply with astonishing rapidity in putrid vegetable or animal infusions; they flourish in moisture, and retain their vitality through any measure of drying. "These spores exhibit a tenacity of vitality not possessed by the mature bacilli, nor indeed by other varieties of bacteria, since their vital activity is sometimes unimpaired by prolonged boiling or by immersion for months in absolute alcohol, either of which procedure destroys mature forms. The spores seem under ordinary circumstances the impersonation of immortality. Time seems powerless to weaken them."

If these things are so, it unlocks the mystery of the persistent potency of the contagion of such zymotic diseases as diphtheria, scarlet fever, smallpox, tuberculosis, and perhaps a far wider range of disease.

The limits of this paper will admit of but brief allusion to the part these organisms play in only two classes of disease.

The results of the investigations of Drs. Wood and Formad, under the direction of the American National Board of Health, are so in sympathy with the general habits of the disease, and the results of varied therapeutical measures, that we are inclined to accept them readily.

"They have found that in every case of true diphtheria the membranes are loaded with minute organisms, micrococci, while the blood and the internal organs of patients dying from the disease are similarly infected.

"They have ascertained also how these micrococci destroy life. They attack the white corpuscles or leucocytes in the blood. These lose their form, and eventually burst, giving exit to an irregular transparent mass packed with micrococci. Hence, a new and multiplied crop of blood foci, and, with the increased destruction of the white corpuscles of the blood, the destruction of the person in whose veins the contaminated blood flows. They showed, also, that the disease can readily be communicated artificially from animal to animal. Another fact detected by Drs. Wood and Formad is of extreme importance, as showing how epidemics of diphtheria may be brought about as a development of the malignancy of sore throats not hitherto regarded as akin to diphtheria. They showed that in ordinary sore throat as well as in diphtheritic sore throat, the micrococci are present, differing only in development and activity. In other works, diphtheria may be regarded as due to naturally cultivated micrococci, the cultivation being of such a kind as to increase their destructiveness."

"After a most elaborate and careful series of experiments, and study extending over two years, Koch, a German chemist in government employ, made the announcement that "the active agent in the induction and propagation of tuberculosis is a distinct species of bacterium, a bacillus; that tuberculosis does not occur without the presence of this organism; that conversely all those anatomical changes and only those should be called tuberculosis whose point of departure from the normal condition is the presence and vital activity of this bacillus."*

This assertion covers and identifies tuberculosis, cheesy pneumonia, and pulmonary consumption, having a common element, the presence of a specific bacillus.

Like the earlier work in this microscopic field by Pasteur, Koch's announcement has aroused a wide discussion and thorough review of his work and conclusions.

Upon the authority of Dr. Wm. T. Belfield, from whose recent Cartwright lectures before the Alumni Association of the College of Physicians and Surgeons, New York, I am drawing liberally for my information.

Koch's work has received the unanimous confirmation of those who have tested his statements and experiments. Koch found the same bacteria in the spontaneous tuberculosis of the hog, chicken, ape, guinea-pig and rabbit. He further satisfied himself of the inoculability of tuberculosis, (that living bacteria were found only when living bacteria were introduced into the system); that while vaccination with tuberculous matter produced the disease, if its vitality was destroyed before inocculation, it was powerless to induce the disease, and *contained no living bacteria;* that bacteria were often, *not always*, present in the sputum of tuberculous patients, but never, so far as examined, in any other.

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* Belfield's lecture.

Now if we can go one step further as a deduction from Koch's work, that bacteria cause tuberculosis, we have a new, important, and interesting field opened up before us—we have the key that unlocks the mystery of what so often happens to us, namely, that one case of tuberculosis in a family is so often followed by others.

If the active agent of tuberculosis is a bacillus, and if baccilli may be conveyed through the sputum and other channels to others, and these infect still others, it becomes a matter of very great and vital importance, and it may be that the consumptive ought to be isolated as well as the diphtheritic or scarlet fever patient.

The truth is, we are slow to see the power of slow moving forces, and to appreciate the waste and destruction of the slow moving diseases.

If tuberculosis carries off one-fifth of our population, and is assuredly infectious, is it not a proper disease for sanitary regulation and restraint? Are we not as much bound to protect against the bacteria of tuberculosis, as the bacteria of diphtheria. Is it not as wide-spread, as sure in its effects and disastrous in its waste in human lives? Ought we not to point out to the wife the hazard in watching by the bedside of the consumptive husband, and the peril of occupying the same bed and room? Ought we not to separate the one daughter from the other dying from tuberculosis, as we do one child from another diphtheritic child. The hazard differs only in the swiftness of coming consequences. If slow, none the less sure, and vital statistics will show, I think, that tuberculosis destroys more lives than any of the zymotic diseases, concerning which so much care is taken to prevent their origin or spread.

CORRESPONDENCE.

THE SANITARY CONVENTION AT REED CITY, MICHIGAN.

UNDER THE AUSPICES OF THE MICHIGAN STATE BOARD OF HEALTH.

Reported for THE PHYSICIAN AND SURGEON.

The convention was held April 26 and 27, 1883, and was a very successful one, being fairly attended by the citizens of the place, by health officers of townships, cities, and villages in the surrounding counties, and by sanitarians from other parts of the State. Among those present from other places were: Reverend Geo. D. Gillespie, D. D., LL. D., Bishop of Western Michigan, of Grand Rapids; Honorable John Avery, M. D., of Greenville; Victor C. Vaughan, M. D., of Ann Arbor, Arthur Hazlewood, M. D., of Grand Rapids, and Henry B. Baker, M. D., of Lansing, members of the State Board of Health; H. D. Bartholomew, C. E., of Lansing; Drs. C. M. Martin, of Greenville, C. S. Ford, of Cedar Springs, P. P. Shorts, of Ludington, C. V. Beebe, J. Kingsley, and L. S. Ellis, of Manistee, F. J. Groner, and Romig, of Big Rapids, DeGroat, of Paris, E. Halsey Wood, of Hersey, and Parish, of Evart; the following health officers were present: Dr. D. E. Robinson, of Manistee, Dr. J. W. Badger, of Big Rapids, Reverend E. H. Day, of Cadillac, Dr. J. W. McNabb, of Sheridan township, Newaygo county, Dr. A. J. Thompson, of Burdell township, Osceola county, Dr. E. Treadgold, of Ellsworth township, Lake county, Dr. W. H. Aylesworth, of Solon township, Kent county; also Reverend Mr. Martin and Mr. Ash, of Ashton; Professor Foreman, of Ludington; Judge J. B. Jenkins, of Hersey; Messrs. Lacy, of Nirvana, Clark, of Fremont, Utley, of Newaygo, and others. After the pleasant introductory remarks by the president of the convention, Reverend J. W. Hallenbeck, and a neat and cordial address of welcome by Mr. Willis M. Slosson, president of the village, and a statement of the purposes of the convention by Honorable John Avery, M. D., president of the State Board of Health, the first paper was read by H. D. Bartholomew, C. E., city engineer of Lansing, Michigan, on "Drainage and Sewerage," in which he stated the principles which should govern the laying out and construction of drains, the principles which should govern the construction of sewers, calling attention to the different requirements in the two cases, drains requiring ready entrance of water throughout the entire system, while sewers should be watertight at all places except at entrances and exits provided. He spoke of the rules to be observed in calculating the size where it was attempted to make one set of conduits fulfill both these requirements, and pointed out the advantages of the separate system under certain circumstances where applicable. He then made special recommendations for the conditions at Reed City.

Dr. E. S. Richardson, of Reed City, the secretary of the convention, in his paper on the water supply of Reed City, showed diagrams illustrating the subject. The first was a profile of the Flint and Pere Marquette railway from Ludington to Midland, showing that the water supply of Reed City must come largely from the rainfall on the circumscribed area west of Reed City. Another diagram exhibited a section of the earth down to the level of the bottom of the wells from the depot to the cemetery, the latter being on the highest ground, and the soil being sandy. Extraordinary precautions will need to be taken to prevent the leaching down from the cemetery and privy-vaults in the town to the water-supply beneath. Out of a large number of wells examined in the place, he had found but two contaminated, and samples of the water from them were exhibited illustrating the evidence of sewage-contamination; he also showed a sample of water from a well outside of town on premises where there are cases of typhoid fever, and one recent fatal case. The water was very foul as might be anticipated from the position of the well, between the house and the barn, which are on banks of clay reaching into a stratum of sand which has no continuous protecting layer of clay over it and receives the washings from the barn.

Honorable J. B. Judkins, circuit judge, read an interesting and valuable address on the relation of the people to public health laws, showing that there could be no true and healthful liberty of the people except by a general support of such laws.

Professor V. C. Vaughan, of the University of Michigan, read a paper carefully giving the nature of food, its proper office in the body, and a detailed account of the results of examination of very many different kinds of food, showing the nature of the adulteration of each.

Mr. O. P. Dewey, of Reed City, presented the subject of the mischief done to public health by means of patent medicines and quack doctors.

Reverend E. H. Day, health officer of Cadillac, read a paper on the disposal of slop-water and waste mattter in villages.

F. J. Groner, M. D., of Big Rapids gave a very interesting and able resumè of the present literature of the subject of germs in diseases, including a list of a large number of diseases now known, or believed to be caused by their own specific germs. Incidentally, he referred to several grounds for hope that in the near future, several of these diseases might be favorably modified by means similar to that by which small-pox is modified by vaccination.

Honorable John Avery, M. D., president of the State Board of Health, read a paper and exhibited diagrams showing how ordinary dwellings, already constructed, may be properly ventilated, also plans whereby ordinary dwellings could be constructed with good ventilation without great extra cost.

C. H. White, M. D., of Reed City, gave a concise history of diphtheria, and a short account of what is now known of that disease. In the discussion which followed, Henry B. Baker, M. D., secretary of the State Board of Health, presented a short paper entitled, "Epidemic-Waves of Diphtheria," showing that the disease tends to recur in a community at comparatively regular periods, and that this period seems to be shorter in cities than in sparsely settled countries. This evidence seemed to indicate that diphtheria was usually spread from person to person, and from country to country. Dr. Richardson mentioned cases illustrating the great contagiousness of the disease, and the general tendency of the discussion was in the same direction, and at the close of the discussion the document issued by the State Board of Health on the restriction and prevention of diphtheria, was distributed to the audience.

Dr. L. S. Ellis, of Manistee, read an able paper on how diseases are contracted and communicated, dwelling at some length on recent experiments by Koch and others, tending to show that consumption is a communicable disease.

C. M. Martin, M. D., of Greenville, in a paper entitled "How we get sick," went over the dangers, climatic, lack of ventilation, from lack of proper clothing, from exposure to contagion, from improper water supply, from improper food, making a very instructive address.

The convention closed with votes of thanks to the officers, etc. and Dr. Avery responded in behalf of the State Board of Health, for the interest manifested in the convention.

BOOK REVIEWS.

THE TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION. Volume XXXIII. Philadelphia: 1882.

At the time of the meeting of the Association, our correspondent gave us a good synopsis of the most important papers, so there is but little for us to say in reviewing the volume. The work of the secretary has been well done. We suppose that this is the last time that the transactions will appear in an annual volume, as the journal will probably be started soon after the Cleveland meeting. We are informed that Dr. N. S. Davis, of Chicago, has been chosen as editor. No better selection could have been made.

THE DISPENSATORY OF THE UNITED STATES OF AMERICA. By Dr. Geo. B. Wood and Dr. Franklin Bache. Fifteenth edition, rearranged, thoroughly revised and largely rewritten with illustrations, by H. C. Wood, M. D., member of the National Academy of Science; Professor of Materia Medica and Theraputics and of Diseases of the Nervous System in University of Pennsylvania, Joseph P. Remington, Ph. G., Professor of Theory and Practice of Pharmacy in the Philadelphia College of Pharmacy, ect., and Samuel P. Sadtler, Ph. D., F. C. S., Professor of Chemistry in the Philadelphia College of Pharmacy, and of General and Organic Chemistry in the University of Pennsylvania. Leather; pages, 1928. Philadelphia: J. B. Lippincott & Co., 1883. For sale by Sheehan & Co., Ann Arbor.

For one half a century the United States Dispensatory has been a work of frequent reference to nearly all the physicians and pharmacists of this country. For the past few years this great work has needed revision. This has now been done, and in a most thorough and satisfactory manner. The greater part has been rewritten. The text now conforms to the new pharmacopœia, and all the new officinal preparations are introduced. The three editors have divided the work according to their specialities, one giving the botany or chemistry, the second giving the materia medica, and the third, the medicinal uses. We dare say that this work as it now stands is not excelled for thoroughness.

It seems almost out of place to mention any trifling criticisms that we may have. We have met with no serious mistake. However, we will call attention to what we have observed. On page 35, we find the following paragraph: "A milder grade of arsenical poisoning, yet sometimes serious in its consequences, has resulted in many instances from the inhalation of the air of appartments lined with green wall-paper, which owes its color to arsenite of copper, and from which a fine poisonous dust escapes when the paper has not been well prepared. (See *Chemical News*, March 24, 1860). The burning of green tapers is sometimes attended with an arsenical odor; and chemical examination has shown that, though in relatively rare instances, they do contain arsenious acid in quantities sufficient to prove injurious. (*Lancet*, 1873, page 715). Death has also resulted in more than one instance from working in the manufacture of green artificial leaves, (*Chemical News*, November 30, 1861.) Ulceration of the anus has resulted from the habitual use of green paper, and has disappeared on the disuse of the material."

From the above it would seem that arsenic is used in coloring green papers only—an error which has been pointed out repeatedly. Mr. Jones in a report of analyses of wall-paper found the largest amount of arsenic in a drab paper, (THE PHYSICIAN AND SURGEON, August and September, 1882).

On page 45, Ure's error in supposing that benzoic acid converts uric into hippuric acid is pointed out, and the statement is made that "the benzoic acid is probably converted into hippuric by combination with a nitrogenous body, either derived from urea or formed at the expense of it," It certainly has been proven that this body is glycin, and we can hardly say that glycin is derived from urea.

On pages 53 and 113 the term, "porrigo" is used. As was long ago stated by Fox this term is used to designate so many diseases, that its use should be discarded.

On page 85, it is stated that experience has not shown that the internal administration of nitric acid would clear up a phosphatic deposit in the urine. This is true, but only the most superficial reasoning could have led any one to suppose that the internal administration of nitric acid could convert an alkaline urine into an acid one. When absorbed into the blood the nitric acid will become a nitrate and cannot affect the reaction of the urine. Phosphoric acid may change the reaction on account of its forming acid phosphates in the blood, and acid salts diffuse through animal membranes more readily than neutral salts do.

On page 102 sodium salicylate is recommended as the best form for the administration of salicylic acid in rheumatism.

As was pointed out by Dr. Donnelly at the last meeting of the American Medical Association, the potash salt is much the more efficient.

We are inclined to doubt the statement made on page 372 that Missouri furnishes the castoreum for the Philadelphia market. It probably comes from the head-waters of the Missouri river.

But these little inaccuries are to be expected in a work of this magnitude, and indeed we are supprised at the rareness with which the slightest excuse for criticism appears.

HAND-BOOK OF THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE THROAT, NOSE AND NASO-PHARYNX. By Carl Seiler, M. D., Lecturer on Laryngology at the University of Pennsylvania; Chief of the Throat Dispensary at the University Hospital, etc., etc. Second edition, thoroughly revised and greatly enlarged. Cloth; pages, 295. Philadelphia: Henry C. Lea's Son & Co., 1883. For sale by Sheehan & Co., Ann Arbor.

It is not difficult to give this book its place in the literature of the subject on which it treats. For the specialist, it is of no value. For the general practitioner, Dr. Seiler's work is not so good as those of Mackenzie and Bosworth, but is preferable to that of Ingalls. We might say, as the embarassed visitor said to his hostess, who apologized for the quality of the food set before him, "good enough what there is of it." The statements, with reference to treatment for instance are too general, for the physician who has no other guide to rely upon. As an illustration of this we turn to the treatment of syphilitic laryngitis and find that the operator is advised to cleanse the parts, before applying nitrate of silver, with "an alkaline solution containing carbolic acid." We suggest that it would have been well had the author specified some good cleansing solutions, such as Dobell's, the formula for which he had already given in a preceding section of the book.

It is amusing to the general practictioner to see how anxious some specialists are to invent and modify instruments. It seems to be the height of ambition with some men to have their names as prefixes to a speculum or probe. Often this is done when the modification is really no improvement on the existing piece of apparatus. For instance Seiler's reservoir insufflator is a clumsy piece of work when compared with Smith's well-known insufflator.

There is one statement in Dr Seiler's book, the accuracy of which we are inclined to question. The statement occurs on page 132 and is as follows: "The one great peculiarity of syphilitic ulcerations in the upper air passages, and especially in the larynx is their symmetrical distribution. Thus we find ulcerations of similar shape in the same position on either side of the larynx, occupying, for instance, the middle of each ventricular band, or, if we see an ulcer on one side only, we notice a focus of inflammation of similar shape in a like position on the other side, and what is true in regard to the symmetry of ulceration is also true of the distribution of foci of inflammation." Now, from our own observation of syphilitic ulceration of the larynx, we had formulated a statement directly contradictory to that given above from Dr. Seiler's book, we had concluded that one of the chief characteristics of syphilitic ulcerations of the larynx was asymmetry or a tendency to confine themselves to one side. Startled by the statement of the author we turned to Bosworth and found the following (page 311): "One peculiarity, however, is noticeable in these ulcers (syphilitic), namely, their tendency to confine themselves to one side of the larynx. This is especially true where their origin is in the false cords; but where involving the arytenoid cartilage or epiglottis, they seem to manifest a hesitancy in extending to the opposite side, though still manifesting their destructive character on the side of the larynx in which they originated."

We write notices of books for the purpose of aiding our readers in the selection of new volumes to be added to their libraries, and we have given this book the position, which, in our opinion, it deserves. It belongs to that large and constantly increasing class of books, which may be called superfluous.

SELECTED ABSTRACTS.

THE ACTION OF QUININE ON THE HEART.

During the epidemic and since its decline in Paris, quinine has been largely used in the treatment of typhoid fever. The need which has been felt for more exact knowledge of its action on the heart, has induced Mm. G. Sèe and Bochefontain to undertake a series of experiments on animals, with regard to this question. The observations were made in the first place upon both cold and warm blooded animals, and they found that the results were about the same. The first toxic effect when quinine is given by the stomach or beneath the skin, is acceleration of the pulse, accompanied by a considerable elevation in the arterial pressure. When administered by the stomach these effects of the drug last for about half an hour. At the end of this time these symptoms subside and the pressure then falls below the normal. The same results are obtained by intra-venous injection, except that the initial increase of pressure is less evident. During this period the heart's contractions continue regular in time and equal in force, but occasionally there is an increase in the degree of systolic contraction.

In a healthy man very little effect on the temperature is produced by quinine. Nevertheless, the process of oxidation in the body undergoes a very considerable diminution. The pulse, however, becomes less frequent, and the blood-pressure falls in arteries.

In the typhoid patient the temperature falls after the first, and especially after the second gramme. It falls a degree and a half in about six hours, and the effect continues for about thirty-six hours. The amount of oxidation in the system lessens in the same proportions. The pulse becomes lessened in frequency even more than in the physiological condition. The blood pressure, which pyrexia lowers, undergoes a corresponding increase. Moreover the force of the heart is increased by the influence of the quinine. The investigators thus conclude that the influence of quinine in typhoid fever is purely beneficial.

The conclusions of Dr. Laborde, another French physiologist, are very different. Experimenting on the same animals, he has also observed that quinine produces two different effects. He noticed the same initial increase in the force of the heart's action, but describes the subsequent depression as much more considerable in degree. He observed the heart even to become irregular, and to "tend to drop." If large doses are given from the first, the early stage of increased energy cannot be observed and the heart is at once enfeebled. There are symptoms of stupor and collapse, and, finally death in consequence of cessation of the heart's action. This physician even goes so far as to regard these facts as the explanation of the occasional sudden death in the cases of typhoid fever treated with quinine. In this disease the muscular tissue of the heart rarely escapes degeneration, and hence a remedy which actually weakens the heart must be given in such an affection with extreme caution. Until the confirmation of the statements of Sèe and Bochefontain quinine must be regarded as one of those remedies to which this caution applies.—*Lancet.*

SIGNS OF CONVALESCENCE IN TYPHOID AND SCARLET FEVER.

La France Médicale says, that according to a communication received from Dr. Chauffard, the occurrence of multiple superficial abscesses, and that of polyuria, are two signs of convalescence in typhoid fever. The *Lyon Medical* states that M. Manjot, in giving a description of an epidemic of scarlet fever at Balley, said the defervescence was always marked by an extraordinary slowness of the pulse. It appeared on the fifth or sixth day' when the eruption began to fade, and continued during the desquamative stage until convalescence. The slowing was a sign of near recovery.—*Lancet.*

PECULIAR TREATMENT OF ERYSIPELAS.

The *London Lancet* of March 10 reports a clinical lecture delivered at Charing-Cross Hospital, by Mr. Richard Barwell, relating five cases of erysipelas, the treatment of which consisted of simply painting the affected parts with white lead. In his remarks Mr. Barwell calls attention to the relationship between the *modus operandi* of the treatment, and the morbid cause of erysipelas. He thought the rapid success of the treatment, in the cases cited, sufficient to show that a very great effect is produced upon this disease and its congeners by covering the surface with white lead paint. He believes this is entirely due to the exclusion of air; since the lead of that compound is in an insoluble condition; that the inflamed skin is not in a state to absorb any material applied on its surface: by the time that it has recovered, the lead is separated from the living tissue by a tolerably thick layer of desquamated, and dead epidermis. Mr. Barwell states, since the germ theory of disease has been propounded, this has been considered to be a typical germ-produced disease. It certainly comports itself after that fashion. And yet here, in a number of well marked cases, this disease is seen to yield to a mere local application—to simple exclusion of air; yielding, that is to say, not hesitatingly, or doubtfully, but at once and unmistakably. No attempt was made to show why a general systemic disease should be thus cured by a purely local treatment.

EARLY DIAGNOSIS OF BRIGHT'S DISEASE.

Dr. McBride (*Transactions of New York Academy of Medicine*) closes an able paper on this subject as follows:

(1) That the diagnosis of chronic Bright's disease can be made with much certainty if a thorough examination be made of all the symptoms and signs presented: that a very considerable aid is afforded in the diagnosis by the condition of arterial tension and by certain conditions of the heart and blood-vessels, by the quantity of the urine passed and its specific gravity, and by the disturbances in nutrition and complications which may supervene.

(2) That it is very probable that the diagnosis of the presence of chronic Bright's disease can be made when the ordinary well-known conditions of the urine common to chronic Bright's disease are not present or have not appeared, and when no evidences of œdema, anasarca, or uræmia can be found. In such cases the urine is of high specific gravity, 1020 to 1036, contains abundant deposits persistently of oxalate of lime, and uric acid crystals modified or not with hyaline casts, and much granular matter. Albumen may be entirely absent or only occassionally found. In these cases increased arterial ten-

sion is present with accentuation of the aortic second sound and perhaps beginning hypertrophy of the left ventricle, and not infrequently aortic murmurs or a mitral regurgitant may be heard. Associated invariably with these signs we find naso-pharyngeal, bronchial, or gastric catarrh. Emphysema is frequently met with, and bronchitis, pneumonia, and cerebral hemorrhage are of very common occurrence. I have been much surprised to find how frequently heredity exists, and this may assist somewhat in diagnosis.

(3) That it would seem that we are justified in claiming that a diathesis or tendency to chronic Bright's disease may be made out. The evidences in support of such a claim are as follows: Heredity; the presence, as a rule, of urine of a higher specific gravity than the normal; the frequent presence of crystals of oxalate of lime and uric acid in the urine; frequent appearance of hyaline casts with granular matter; the occasional appearance of albumen in the urine for a few days; the presence of high arterial tension from time to time, and changes in the heart in consequence of the increased arterial tension; the occurrence of naso-pharyngeal, bronchial, gastric, or intestinal catarrh, and of emphysema.

Observations to demonstrate a tendency to chronic Bright's disease must, of course, be carried on for a very considerable period of time.

ADDISON'S DISEASE.

On the above subject Dr. Burger, of Bonn, contributes a concise essay (Berlin, Hirschwald) in which an inquiry based upon the chief literature on the subject is made into the assumed connection between disease of the suprarenal capsules, and the phenomena of Addison's disease. Concluding with a review of the facts and arguments which point to the abdominal sympathetic as the source of its symptom, the writer sums up as follows: That structurally the adrenals should be classed with the blood vascular glands and they are not necessary for life. They have no connection with the cutaneous bronzing of morbus Addisonii; a pigmentation which is not peculiar to that affection, since it may be present in very different forms of cachexia. Disease of the adrenals are not uncommon, and they very often run their course without producing the phenomena of Addison's disease. In Addison's disease the most varied forms of adrenal affection may occur; but where supra-renal disease is present it does not contribute to the symptoms of Addison's disease, which depends upon an affection of the semilunar ganglia and solar plexus. This nerve change is generally brought about by disease of the supra-renals, the most frequent form of which is tuberculous inflammation. But the affection of the semilunar ganglia, and solar plexus may be equally induced by disease of other organs, and may further arise spontaneously, so that the symptoms of Addison's disease may be produced apart from any change in the supra-renal capsules. In the main these results are consonant with our present knowledge of the pathogeny of this remarkable disease; the point which seems most open to question being that many kinds of morbid change of the supra-renal capsules may be found associated with Addison's disease.—*Lancet*, March 17.

ON PICRIC ACID AS A MEANS OF DISTINGUISHING ALBUMEN FROM PEPTONE.

BY GEORGE JOHNSON, M. D., F. R. S.,
Professor of Clinical Medicine, Senior Physician to King's College Hospital.

Amongst the few objections which have been raised to the use of picric acid as a test for albumen in the urine, is the statement that it forms a precipitate or coagulum with peptone, which is indistinguishable from that which it gives with albumen. If this statement were in accordance with facts, and if peptone be ever found in the urine, the use of picric acid as a test might be a source of confusion. The attention of my son and myself having been directed to this subject, we find that nothing can well be easier than to distinguish the precipitate which picric acid forms with albumen from that which it gives with peptone. We have experimented in the usual way, both on peptonised white of egg and on fibre of meat. The white of egg and meat fibre respectively were digested for some hours at a temperature of from 90° to 100° Fahrenheit in water acidulated with hydrochloric acid, and mixed with Bullock's pepsina porci. The liquid was filtered, and freed from the small amount of albumen which it was found to contain by boiling and a second filtration. We thus obtained a clear liquid peptone, which was coagulable neither by heat nor by nitric acid. On the addition of a saturated solution of picric acid there was an abundant gelatinous precipitate of peptone, *but this precipitate was immediately and completely redissolved by heat below the boiling point, and reformed on cooling.* Further, we found that the peptone, precipitated by picric acid, was completely dissolved by the addition of a few drops of nitric acid. Here, then, we have two simple and certain tests, by means of which albumen may be distinguished from peptone. The coagulated albumen, which is thrown down by picric acid, is always rendered more opaque and coherent by heat, and is insoluble in nitric acid; on the contrary, peptone, which is thus coagulated, is readily dissolved, both by heat and by nitric acid. The use of picric acid as a test, therefore, so far from tending to the confusion of albumen with peptone, will be found to be the simplest and most effectual means of distinguishing these two compounds and even of separating them from each other when they co-exist in the same liquid. If the mixed precipitates, formed with picric acid, are heated, and then placed on a warm filter, the dissolved peptone will pass through, while the coagulated albumen remains on the filter.

Another means of separating dissolved albumen from peptone is that before referred to—namely, coagulating the albumen by heat, and then separating it by filtration.

It has been asserted that peptones occur in the urine. This may be a fact, but with our present knowledge of this subject I feel some doubt as to the truth of the statement My conviction is that if it ever occurs it must be a rare and exceptional phenomenon. Within the last two years, during which, at the suggestion of my son, I have used picric acid as a test for albumen, I have tested with it some hundreds of specimens of albuminous urine, and although I have not always applied heat to the urine after adding the picric acid solution, I have done so in a large proportion of cases, and in not one single instance have I found that the precipitate formed by picric acid has been either wholly or partially redissolved by the application of heat, but, on the contrary, it has invariably been rendered more dense and opaque. In almost every instance, when I have not heated the specimen after coagulation by picric acid, I have added nitric acid to another portion of the same urine, and have thus shown the presence of albumen, except when the amount of albumen present had been too small to be detected by the nitric acid test.—most of these being the urines of convalescents from acute albuminuria in which, shortly before, the presence of albumen has been indicated by heat and nitric acid. Now, since peptone is not coaguable by nitric acid, it is clear that when the urine is found equally coagulable by nitric and picric acid, the case is not one of peptonuria. And I infer that amongst these numerous cases there has not been one in which the urine has contained poptone.

It would seem *à priori* probable that peptonuria would be as rare a phenomenon as the so-called chyluria. This, however, is certain that, with the modifications of the picric acid test, to which I have referred, there can in future be no difficulty in detecting peptonuria when or if it does occur, or of distinguishing it from the far more common condition, albuminuria.

It has been customary of late to speak of various kinds of albumen, but this surely is not the language of scientific chemistry. There are various albuminoid bodies—such as, for instance, fibrine, casein, etc.—but, of albumen, there is but one kind. whatever may be its source. The albumen which is found in the urine is a derivative of blood-serum, and is always one and the same, although its behaviour with reagents will differ in accordance with the state of combination and of admixture in which it exists. Thus, albumen in alkaline, or in some neutral urines, is not coagulable by heat; and, again, the presence of a small quantity of a mineral acid, or a larger quantity of a vegetable acid, results in the formation of an acid compound of albumen, in which no amount of boiling will cause coagulation. The common practice of adding acetic acid to urine before applying heat, is likely to mislead by the formation of such an acid compound, not coagulable by heat. A small quantity of albumen, therefore, often escapes detection by this fashionable but fallacious method of testing. On the other hand, picric acid has not only the advantage over heat and nitric acid of being so sensitive that it will indicate the presence of albumen in a specimen experimentally diluted beyond the point where the other tests fail to detect it, but it acts equally well in acid, neutral, and even in alkaline urines; for, although the coagulation of albumen by picric acid is prevented by caustic alkalies, I have not once, in examining some hundreds of specimens, found it necessary to acidulate the urine before adding the picric acid. Another advantage of the test is, that it consists of a single cheap substance, which is not liable to undergo chemical change by being kept either in a solid form or in solution; and, without making seemingly invidious comparisons with other tests which have recently been recommended, this, at any rate, may be said of picric acid, that, in its action, it is singularly free from sources of fallacy. In fact, my estimate of the value of picric acid as a simple, certain and most delicate test for albumen in the urine, has risen in proportion to my increasing experience of its efficacy. I confidently predict that it will soon come into general use; and one good result of the common employment of so trust-worthy a test will be, that the next generation of practitioners will see fewer cases of incurable degeneration of the kidneys than daily come under our notice at the present time. For the history of a large proportion of these cases is, that some ten, fifteen, or it may be twenty years ago, there was an acute affection of the kidneys with albuminuria, which was supposed to have passed away; but the complete freedom of the urine from albumen was not ascertained by trustworthy, and frequently repeated, tests. The recovery was incomplete; an unsuspected latent disease has been insidiously making progress, until at length some of the many distressing results of degeneration of the kidneys bring the patient again under medical observation, when it is only too obvious that, not only have the kidneys in the course of years become incurably diseased, but that many other organs and tissues have become involved in the morbid process. There is, then, little more to be done than to watch the progress of the disease to its inevitably fatal result.

The calamitous results to which I have referred may, in a large proportion of cases, be prevented by the careful watching and treatment of recent cases of albuminuria, with a determination on the part of the practitioner that the patient shall not be declared convalescent until the most delicate available test fails to detect the smallest trace of albumen in the urine at any period of the twenty-four hours, and for many successive days.

It cannot, in my opinion, be too emphatically declared or too generally known that, while a fraction of a grain of saccharine matter per ounce is a normal constituent of all urines, the smallest trace of albumen is abnormal and pathological; and, if permanent, it has in it the germ of future trouble, and, it may be, of irreparable disaster.—*British Medical Journal.*

THE ANTISEPTIC AND PHYSIOLOGICAL ACTION OF RESORCIN.

From some experiments made by Dr. W. Platt (*American Journal of Medical Sciences*, January, 1883) it appears, taking the *minimum* time in each series, that bacteria developed in 20 cubic centimeters of urine exposed to favorable conditions, and that 0.050 gram, of resorcin has no appreciable influence, bacteria developing within eighteen hours. Twice that quantity, (0.103) kept urine free from bactaria twenty-four hours, six hours longer; while 0.150 deterred their development to four days, urine without any addition showing bacteria within eighteen hours. If urine be *boiled*, organisms are found usually considerably later, forty-six to sixty-five hours. 0.50 gram of carbolic acid hinders development of other *living organisms* (large enough to be detected by a power of five hundred and fifty diameters) in boiled urine at least twelve days, bacteria eighteen days, the usual bacillus not developing at all. While 0.150 of *resorcin* (about two and one-half grains) hinders development of bacteria four days, one-third that amount of carbolic acid preseves a similar amount of urine free from organic life, under similar conditions, three times as long. Some experiments made to determine the physiological action of resorcin, showed that in six warm-blooded animals it caused—(1) Restlessness and trembling. (2) Rapid respiration very early in rabbits. Early and very marked after a lethal dose in one dog, later after a lesser, but fatal dose, in another. Not marked after non-lethal doses. (3) Staggering, unsteady gait, loss of coördination, especially in hind limbs, present early in all the animals excepting one rabbit where a small dose was exhibited. (4) Twitching of muscles, especially of hind limbs, constant in all. (5) Clonic contraction of nearly all flexors and extensors of body, more especially of those attached to the pelvis and shoulder. (6) In the animals that died, the imitation of the natural running or hopping movements before death, as the animal lay upon its side, was striking.—*Dublin Journal of Medical Science.*

MIGRAINE AND ITS TREATMENT.

If repeated attacks of migraine, as indicated in our last issue, may set up pathological processes in the cerebral organs, this malady deserves careful consideration. To understand its nature, to compass its cure, and thus prevent the secondary changes, are, clearly, very necessary duties. Before we can form a proper therapeutical diagnosis, we must have a true conception of its character—a knowledge of the several elements which make up the morbid complexus. Migraine is commonly regarded as a neurosis—a functional nervous disorder—affecting the fifth nerve. Such a conception is necessarily partial. It is a neurosis, and something more. As a neuropathic disorder, its seat is not limited to the fifth nerve, for the stomachal derangement with which some cases open and others close, signifies derangement of the vagus. The nucleus of the fifth and that of the vagus lie in close juxtaposition and have intimate relations. The mechanism in the production of a seizure may consist in a primary affection of the fifth, the transference of the irritation to the nucleus of the pneumogastric, or in a primary implication of the terminals of the latter in the stomach, and the transmission of this impression to the nucleus of the former. There are then two forms: a triacial and a pneumogastric. There are, however, two conditions of the sympathetic which may accompany either of these forms: one, a condition of vaso-motor tetanus; the other, a condition of vaso-motor paresis. Eulenburg, indeed, regards sick-headache as a disorder of the sympathetic. In that form characterized by vaso-motor constriction, the face is pale, the pupil dilated; in the other form, the face is flushed, the pupil contracted. According to Fèrè, whom we have already quoted, those cases are most serious in their ultimate action on the brain in which the state of the vessels is that of contraction. Persistent seizures of either form of the malady must exercise a deleterious effect on the nutrition of the brain substance ultimately. Hence the importance of judicious treatment.

The management of any case, to be successful, must be concerned with the functional condition of the organs affected. Do the attacks begin with stomachal disorder? A systematic plan of diet, in which, as a rule, the starchy, saccharine, and fatty elements of the foods are either cut off, or modified, should be inaugurated at once. Usually, there are individual peculiarities,—idiosyncrasies—which must be heeded. Beside the regulation of the diet, remedies to allay the irritability of the end organs of the pneumogastric, are necessary. The results are the more satisfactory if these remedies exert that therapeutical action, formerly known as nervine tonic. First in value is arsenic of which two drops of Fowler's soution, three times a day, should be given continuously for several months or longer.

For the same reasons, oxide of silver (one grain *ter die*) is a valuable remedy, with the limitation imposed by the danger of staining the skin. Fermentative changes with or without the presence of *sarcina*, acidity, the condition of lithæmia, etc., require the sulphities, creasote, the mineral acids, rarely alkalies, according to the special derangements and complications present.

When some modification of the fifth nerve is the initial change, remedies must be addressed to it. The general state is, as a rule, that of depression. The subjects of this disorder are apt to be excitable or "nervous," and they tend to anæmia rather than plethora, hence the utility in many cases of phosphites and phosphates, of nux vomica or strychnine, especially when an atonic dyspepsia is present; and of such nervines, so-called, as guarana, paulinia, caffeine, ammonia, etc.

As the condition of the intra-cranial vessels may play so important a part in subsequent pathological processes, it is very necessary to relieve the functional deragements of the sympathetic. Do we have to deal with the tetanic state of the vessels? Then, the remedies most useful are nitro-glycerine by the stomach, nitrite of amyl by inhalation, bromide of potassum, etc. When this symptom is sudden in onset and violent, the inhalation of amyl nitrite will be most promptly efficacious. When the vascular spasm is thus relieved, the migraine gets better. When this state occurs more slowly, nitro-glycerine is preferable. This remedy has valuable curative properties in those cases characterized by persistently high arterial tension, and hence it may be administered during the interval between the seizures as a prophylactic measure. Bromide of potassium is highly useful in the same group of cases. Full doses (half a drachm to a drachm) must be prescribed when the attempt is made to abort an impending attack—a result which may sometimes be attained. During the interval the bromide may be used to procure permanent results. The spoliative effect of this remedy may be lessened by the conjoint administration of iron, arsenic, phosphates, etc. We have known of cures effected by persistent but careful administration of the bromide of potassium.

The opposite state of the sympathetic system—paresis—must be remedied by agents acting in an opposed manner. In cases characterized by a flushed face, a bounding pulse, injected conjunctivæ, etc., the appropriate remedies are ergot, digitalis, chloride of barium, strychnine, picrotoxine, etc. An efficient combination consists of the extracts of ergot and nux vomica, with digitalis in pill, given mainly in the interval between the paroxysms. A capital remedy in this form of migraine, as Frommhold long ago demonstrated, is a mild galvanic current, applied to include the pneumograstric and cervical sympathetic. The applications should be both labile and stabile—the interruptions slow—and they should be made daily for several months.

Notwithstanding the persistency with which attacks of sick-headache re-appear, from month to month, and for many years, a hopeful view may be taken of the prognosis, if the patient will submit to dietetic conditions, and carry out faithfully the medicinal treatment. In most cases, the best results are had from a combination of plans: by combining the diet system with the remedies for each form of nervous disturbance. Various hygienic regulations need to be enforced. Individuals with neuropathic tendencies should be subjected to all the influences of the best hygiene, and this includes not only the climatic and civic agencies, but all the factors in the personal equation.—*Medical News.*

TREATMENT OF HYDROCELE.

As an improved mode of treating hydrocele, Dr. Melillo (*Il Morgangi*) recommends the employment of a small syringe capable of holding a gramme of a mixture of equal parts of chromic acid and water. After the puncture with the trocar has been made, and the liquid begins to flow out, the point of the syringe is immediately substituted for the trocar, before any more of the liquid escapes, and two grammes of the dilute chromic acid are slowly injected for every eight grammes calculated to exist in the tunica vaginalis. After five minutes the syringe is withdrawn, and nearly all the liquid allowed to escape, after which the canula is withdrawn. Any other irritant may be substituted for the chromic acid, and any sized syringe may be used; the object being only the securing the liquid of the hydrocele as a menstrum for the irritating substance employed.—*Medical Times and Gazette.*

ADMINISTRATION OF PEPSIN.

Pierre Vigier, the distinguished pharmacologist, exposed in the *Gazette Hebdom.* the error of combining pepsine with alkalies. It is the most important and most sure digestive we possess but its activity can be called forth only in an acid medium; and a great number of bodies, by neutralizing it, deprive it of its remarkable power of peptonizing fibrin—all she alkalies, for example. It is indispensible then, that, it should be perscribed alone to avoid all causes of error; whereas it is often combined with alkalies as if it were a chemical product, its power is destroyed, and a great expense uselessly incurred. It should be taken apart in the middle of a meal in the form of an amylaceous powder, or in a solution of sugared wine, or in an aromatic elixir—these being the only efficaceous forms of administration that pharmacy supplies.—*Medical Times and Gazette.*

TREATMENT OF TYPHOID FEVER.

The Academie de Médecine of Paris was engaged for several weeks, discussing typhoid fever, during which Professor Jaccoud presented the treatment to which he has uniformly submitted his subjects of typhoid fever; and explained the reasons, the means, and the result of this treatment. Its reasons he derived from two characteristics of the disease, which are so constant and independent of the individuality of the patient, that they justify this therapeutical heresay which bears the name of "Uniform treatment."

These characteristics are: (1) adynamia, resulting from the typhoid infection itself, and from the duration and intensity of the febrile consumption. (2) abnormal calorfication, this, independently of the consumption it leads to, being the direct source of dangers of another kind, which menace quite especially the heart and brain. Thence two indications in the treatment, likewise constant: (1) spare and sustain *from the commencement* the strength of the patient. (2) Subtract a portion of the caloric that has been produced and restrict its formation. Always fulfil these indications, which are constantly the same, for there is no reason for waiting in a state of inaction. for accidents which you certainly shall have to contend with. Professor Jaccoud obeys these fundamental indications, then, not only by a treatment as uniform as their own constancy, but by a treatment commenced at once.

This treatment consists of two parts, the one absolutely, constant and invariable, the other eventual. (1) The constant treatment is put into force from the time that the diagnosis is certain. It comprises alimentation by means of broths, wine, and especially milk, given in divided doses, so that the daily quantity may amount to between one and two litres. It is always tolerated, and independently of its alimentary properties, milk here possesses the precious advantage of maintaining diuresis at a rate which is sufficient to prevent accidents, that, in a stationary period, too often result from excrementitious retention. The constant treatment also comprises alcohol, given from thirty to eighty grammes per day, according to the individual conditions of the patient and the daily incidents of the disease. Three or four grains of extract of cinchona are added to the alcohol, and this treatment is maintained unchanged until the definitive disappearance of the fever. By these means, alimentation is provided; temperature is lowered; combustion supplied—the autophagy is diminished. This is not all, from the onset the indication derived from the abnormal calorification, is fulfilled by means of cold lotions of aromatic vinegar. The applications are made three or four times in twenty-four hours, when the evening temperature does not exceed 100°, and six times when it rises to 101°, increasing them to eight when it reaches 102° or more. These lotions finally become not only anti-thermic, but truly anti-febrile. The indications derived from abnormal calorification is thus completely fulfilled, a portion of the caloric being abstracted, and its production restrained.

The *eventual* treatment is used when the Professor recognises the fever as possessing a *grave* character. To judge of this he has four signs: (1) and above all, the continuity of the fever. The morning remissions are insufficient when they are not at least equal to the daily variations of the normal temperature, more than one degree. These insufficient remissions denote a special gravity and tenacity of the febrile process. (2) Are interrupted series of evening temperatures above. (3) Absence of depression of the general cure of the curve after three days employment of the lotion. (4) Feebleness of the hearts action, as estimated by the pulse, and especially by direct examination.

Whenever, then, the grave character of the fever is demonstrated by one or other of the preceeding signs, anti-febrile medicinal agents are associated with the fundamental treatment. The ordinary agent of medication is bromhydrate of quinine, which causes less fatigue to the stomach than the sulphate, replaced, according to the case by salicylic acid, but the method of administration is always the same. Regarding the administration, Professor Jaccoud, says: "I proceed by series of two, rarely of three days consecutively, When the signs already enumerated oblige me to again intervene. I always leave an interval of at least forty-eight hours between the two series of administrations. For either medicine the dose on the first day is from one gramme and a half to two grammes, which is my maximum; that of the second day is one-half gramme less; and when there is a third day, the dose is the same as the second day, or diminished according to the case. Whatever the dose, it is given within thirty minutes, in the morning between nine and ten, if the evening temperature is to be reduced, or in the evening between the same hours if morning temperature is to be be acted upon. After one or two of these medicinal series it is the rule for the curve to descend to a lower level. When there is no absolute contra-indication to its employment—alcoholism, violent central symptoms, feebleness of the heart, renal determination, and intensity of thoracic symptoms, salicylic is preferred to the quinine. The inconstant indication derived from broncho-pulmonary congestions and stasis, it is met by the persistent application of dry cups, placed morning and night, to the number of forty to sixty, on the thorax. In concluding, Professor Jaccoud remarks, I wish for the good of the sick to affirm the protest against therapeutical excesses which have led astray for several years the treatment of typhoid fever. The excess commenced with this false idea, that the fever is all the malady. This was the purely antipyretic phase and the error consisted in the exaggerated increase of the doses of anti-febrile agents, especially quinine. So much was this so, that Liebermeister, who nevertheless frequently gave three grammes of the sulphate, was on one occasion, led to indicate the danger of stronger doses, and to blame the conduct of some of his countrymen who went so far as to administer four or five grammes in twenty-four hours. Well, matters did not stop here, and the evil became still more aggravated when the idea arose of applying the bacterian doctrines to typhoid fever. This new phase, this anti-parasitic phase, has been the signal of a true therapeutical outpouring. Before all things the microbe must be killed, and quinine, salicylic acid, phenic acid were given all at the same time. If we reflect for an instant on the similar action of these three agents in large doses on the organic calorification of the heart, the brain, and the kidneys, and if we further reflect that we have to do with a disease which, directly and of itself, menaces these organs, we are able to judge of the dangers of such an association. It is not only the triple, but double association more frequently employed, of quinine and salicylic acid, which should be denounced as dangerous.—*Medical Times and Gazette.*

HYSTERIA IN BOYS.

M. Charcot has just published a short lecture upon hysteria in boys. The author remarks that hysteria may occur in its fully developed form in the male sex as well as in the female. Seventy-seven instances of male hysteria have recently been collected in a thesis by M. Klein; and Briquet asserts that it occurs in the proportion of one male to twenty female cases. Charcot then gives in detail a well-marked case of hystero-epilepsy in a youth of seventeen. The attack commenced by an epileptic seizure with tonic and clonic convulsions, most marked on the left side, with loss of consciousness, but no biting of the tongue. Then the body was bent backwards (opisthotonos) and the patient at length opened his eyes giving a cry of fright, and the attack ended with laughing and crying. In addition there was left hemianalgesia, and a *point hysterogène* in the left sterno-costal region. Tonic treatment and hydrotherapy sufficed together to effect a cure. M. Klein states that in the male sex hysteria is met with most commonly above the age of twenty-four; Charcot thinks it is commonest from twelve to thirteen years. He describes two cases recently under his observation, and the details of the second case are as follow:—A young Jew of thirteen had suffered for a year from headache, which became worse daily at five o'clock, and ended in an attack of convulsions. The facts upon which the diagnosis rested were the (1) persistent cephalalgia, with a spot of exaggerated sensibility on the vertex; (2) the recurrence of the attack always at the same hour; (3) between the attacks, left hemianalgesia (to pricking, cold, and faradisation), with impairment of taste, smell, and hearing on that side, with diminution of the field of vision, chiefly on the right side, and on this side with colour-blindness for every color except red; (4) zones of hyperæsthesia upon the cranium (*zones hysterogènes*). He was ordered to be separated from his relatives, to be treated with tonics, electricity, and hydrotherapy. In four or five days the attacks became less marked, and in fifteen days disappeared. Soon the *zone hysterogène* disappeared, and at the end of a month there remained only traces of the amblyopia. —*Progrès Medical*, December 23, 1882.—*Practitioner*.

SALICYLATES IN ACUTE RHEUMATISM.

BY JAMES SAWYER, M. D., M. R. C. P., BIRMINGHAM.

Abstract of Clinical Lecture in Queen's Hospital.

Since the approximate perfection of surgical anæsthesia, the healing art has won no greater triumph than the employment of the alkaline salicylates in pyrexial rheumatism. I say in pyrexial rheumatism, because I have not found salicylates of any use in rheumatism with a normal body temperature. With a hospital experience reaching back years before salicylates were thought of, I know that the alkaline salicylates, and especially the salicylate of soda, have the power in a larger degree than any other drug or combination of remedial measures whatsoever, of greatly abridging the course, and markedly mitigating the pain in simple forms of rheumatic fever. In making this affirmation, I compare the results of salicylates with four distinct and well-known therapeutic plans for dealing with rheumatic fever—namely: by free administration of bicarbonate of potash, by perchloride of iron, by blisters, and by rest in bed, and nursing care without drugs. The routine dosage is to give fifteen grains of salicyate of soda, dissolved in one ounce of water, every three hours. As the temperature of the patient falls and the articular pains diminish, the frequency of the dose may be lessened; but the remedy should be given not less than thrice daily for at least a week after the temperature has remained normal and pains have gone. Relapses are frequent when the salicylate is given up too soon.

Salicylates have neither prophylactic nor remedial value in cardiac complications of rheumatic fever. For the ordinary eudocarditis of rheumatic fever, I do not know that any drug is of direct service. The length of the patient's life and the degree of his suffering from the almost inevitable effects of eudocarditis, is largely influenced by the way in which he has spent his convalescence. Prolonged rest, and rest in bed for weeks, or even months, does infinite good after an attack of endocarditis. Such rest nurses the damaged heart; it keeps the heart's action, and pulse rate down, thus promoting the removal of inflammatory products from affected cardiac valves and orifices.

For pericarditis, I have faith in fly-blisters. Apply in the case of an adult patient, a blister six inches squre, over the heart. The old-fashioned emplastrum cantharidis is preferred; its slow action is an advantage. In every case of acute rheumatism, take care not to clothe the patient's bed too heavily; but bed him in blankets without sheets, and freely swathe all tender parts with absorbent cotton-wool.—*The British Medical Journal.*

IODOFORM IN DIABETES MELLITUS.

Professor Bozzolo has tested the action of iodoform in the treatment of diabetes, and with good results. He has given as much as thirty grains daily. In one slight case, glycosuria was almost completely suspended; in a very severe case the quantity was reduced; in both patients, diminution in the amount of urine was noted. Investigators in Bozzolo's clinique have come to the conclusion that the administration of iodoform in diabetes, in doses of from fifteen to thirty grains, diminishes the amount of urine and the elimination of sugar, the number of red gobules and of hæmoglobin and likewise reduces the arterial tension.—*Lancet.*

THE TREATMENT OF SNAKE-BITES.

At a recent meeting of the Lower Rhenish Philosophical and Medical Association, held at Bonn, Professor Binz described an interesting series of experiments carried on under his direction with a view of testing various antidotes to the poisons of serpents. He remarked that numerous specifics are heard of amongst the native population of India which as a rule, are found to be of themselves inoperative. Professor Binz stated his opinion that when a real Indian poisonous snake has bitten a person in the usual manner, spirits can alone serve to prevent or to alleviate the spasms of suffocation which are induced by the action of the poison on the respiratory nerves. Atropine and other specifics against the imminent results of analogous character caused by narcotic influences, have been found ineffective against this deadly virus. The most favorable tests made were with chloride of lime, a filtered solution of which was injected into the same place where the fatal virus had previously been introduced. In seventeen trials, made in succession, the poisoned animal survived without the slightest disturbance of its healthy condition. In five succeeding experiments when a relatively sufficient dose of the antidote was administered, or when animals suffering from disease were operated upon, the chloride of lime served only to retard the fatal effects of the poison. The suggestion was made by Professor Binz that the adoption of this treatment in cases of the bites of dogs suffering from rabies might possibly be attended with favorable results, inasmuch as chloride of lime has been shown to have much greater power than any of the caustic substances now usually applied to dog-bites, which have proved to be scarcely, if at all effective against the consequences of snake-bites.—*Lancet.*

PRECAUTIONS WHILST ATTENDING CASES OF INFECTIOUS DISEASE.

Dr. Charles Green, Medical Officer of Health, Gateshead, in a communication to the *Lancet*, suggests that the following precautions be taken when visiting every case of dangerous infectious disease: (1) Always have the window open before entering the patient's room or ward; (2) never stand between the patient and the fire, but always between him and the open window; (3) if possible change your coat before entering the room; (4) do not go in for any unnecessary auscultation or other physical examination; (5) stay as short time as possible in the room; (6) never, while in the room, swallow any saliva; (7) after leaving the sick room wash the hands with water containing an antiseptic; (8) rinse out the mouth with Condy's fluid, also gargle the throat with it and bath the eyes, mouth and nostrils; (9) expectorate and blow the nose immediately on leaving the sick room; (10) keep up the general health by good food, exercise and temperance; (11) in addition to the above recommendations, filter all the air you breathe while in the sick room or ward through an antiseptic medium. The only objection to the inhaler is the unsightly appearance one has with it in situ. This objection is a very slight one when weighed against the greatly increased safety one feels and actually possesses.

GLANDERS IN MAN.

A farmer and his son, the latter seventeen years of age, living in Whiteside county, this State, died in the latter part of March of equinia, having contracted the terrible disease of some glandered horses on the farm. The son was first taken sick with evidences of catarrhal fever and a swelling over the frontal sinus, followed by induration of the parotid right gland, discharge from the nose, pustule and bullæ over the face, trunk and limbs. He lived eleven days after the attack. The father was taken on the day following the boy's death with an attack simulating pleuro-pneumonia, followed by swelling of the glands, formation of pustules, ulcers, etc. He was the attendant of the son throughout the latter's sickness; he died in nine days. The matter became so serious that the interference of the State Board of Health was invoked. Some of the horses were ordered shot, the premises thoroughly disinfected, and any persons found afflicted ordered isolated. The disease is one of the most contagious and of a loathsome character.

Dr. N. H. Paaren, the State Veterinarian, under instructions from the State Board of Health, visited the premises and made an examination which revealed a surprising and disgusting state of filthiness. It is not all unlikely that the deaths of the father and son were hastened, if not ultimately caused, by this filth, another probable illustration of the danger attending decomposition of organic matter in and about a place of habitation. The doctor reports that the celler underneath the dwelling was full of putrid and decaying animal and vegetable matter, skeletons of hogs, dogs, etc., evidently the accumulation of years, a strong, penetrating oder pervaded the dingy and filthy rooms. The farmer and his son had inoculated themselves with the disease while rubbing the nostrils of the horses supposed to be suffering from a cold. The horses remaining on the premises when the doctor arrived were ordered shot and the stable, watering troughs, sheds, fences, hitching-posts, etc., even about the village churches, burned. Dr. Paaren recommended that prompt legislative action be taken in regard to contagious diseases among domestic animals.—*Sanitary News.*

SENSE-CULTURE.

The special culture of the senses is too much neglected by us in this modern busy life. Probably at no previous period of human history has the nervous system, generally, and, more particularly, have the sense-organs been so severely taxed as they now are, but never have they been less carefully cultivated. This is in part, if not wholly the cause of the progressive degeneracy of the faculties of special-sense, which is evidenced by the increasing frequency of the recourse to spectacles, ear-trumpets, and the like apparatus designed to aid the sense-organs. The mere use of faculties will not develop strength—it is more likely to exhaust energy. Special training is required, and this essential element of education is wholly neglected in our schools. With the result we daily witness—namely, early weakness or defect in the organs by which the consciousness is brought into relation with the outer world. It is not necessary to adduce proofs of the position we take up or to argue it at length or in detail. The truth of the proposition laid down is self-evident. On the one hand we see the neglect of training, and on the other the increasing defect of sense-power. The matter is well worthy of the attention of the professional educators of youth. Sense-culture by appropriate exercises in seeing, hearing, touching, and smelling, would, if commenced sufficiently early in life, not merely prevent weakness of sight, deafness, loss of the sense of feeling, and impaired sense of smell long before old age; but by its reflected influence on the nutrition of the brain and upper portion of the spinal cord, would do much to reduce the growing tendency to paralytic diseases, which are very decidedly on the increase.—*Lancet*, March 17, 1883.

A CONTRA-INDICATION FOR PILOCARPINE IN BRIGHT'S DISEASE.

Professor Lousa Martius (*A Medicina Contemp*, Lisbon), thinks that pilocarpine ought never to be given in Bright's disease without previously determining whether the sudoriparous glands are still functionally active. This may be done by giving a vapor-bath; if the skin respond by diaphoreses, pilocarpine may be given with advantage, but if no perspiration shows itself, pilocarpine may do harm. In long continued anasarca from Bright's disease the nutrition of the skin suffers, and the sudoriparous glands are strained of blood and cease to act. In a boy of eighteen with anasarca, pulmonary œdema, scanty urine loaded with albumen, but with no cardiac complications, two centigrams of hydrochlorate of pilocarpine were given hypodermically; central symptoms showed themselves soon after the injection, and the boy died comatose the same evening. The cause was subarachnoid effusion sufficient to cause fatal coma by compression. Professor Martius attributed the effusion to the the action of the pilocarpine, which as it could not escape by any of the usual channels of elimination by diaphoresis, salavation, diarrhœa, or by increasing the flow from the kidneys expanded its energies on the pia-mater and arachnoid, causing thus a fatal effusion.—*British Medical Journal.*

THE COLD DOUCHE IN DELIRIUM TREMENS.

Dr. Broadbent read, in the Medical Society of London, notes of two cases, illustrating the successful employment of the cold douche. The first case was that of a gentleman, aged about thirty-eight, whose health was thoroughly broken down by excesses, especially alcoholic. He had had several attacks of delirium tremens previously to the one from which he last suffered. All treatment by digitalis, bromides, and subcutaneous injections of morphia, only left him in a state of extreme exhaustion. The face was pale and haggard, the eyes wild, and the skin bathed in perspiration, the pulse soft and small, frequent and irregular. He was almost too feeble to turn his head to follow the images of his fantasy. He was constantly muttering and exclaiming, while his fingers fidgetted with the bed-clothes, and every limb, and almost every muscle was the seat of jactitations. The sleeplessness was continuous. He was, therefore, stripped to the waist, and cold water applied over the chest, neck, and face, by means of a large sponge. The result was that he slept, and on waking, asked where the doctor got that water from as he should like it again. The second case in which he had employed the cold douche, was one of sleeplessness and pyrexia after child-birth. He was called on June 3, 1881, to see a young lady, who had been confined of her first child on may 30, the labor had been severe and prolonged, the perinæum had been ruptured, and the bladder paralysed. From the setting in of the labor, and the day before, there had been no sleep whatever. Besides the sleeplessness, there were pyrexia and severe abdominal pain. The temperature was 104° Fahrenheit. She was restless and tossing herself about in bed, the face flushed, the eyes bright, the expression wild and anxious, the skin perspiring everywhere. The pulse was 120, and the milk was suppressed. There were no symptoms indicating that the pyrexia and sleeplessness arose from peritonitis, or puerperal septicæmia, nor was the local tenderness over the left iliac fossæ suggestive of pelvic cellulitis or ovaritis. The cold douche was therefore used. The patient was sponged all over with tepid vinegar and water, and then douched with cold water. The result was that the patient speedily fell into a calm sleep, the pain in the iliac disappeared, and the temperature fell. There was no further complications, and satisfactory convalescence followed.—*British Medical Journal.*

OXYTOCIC ACTION OF QUININE AND A METHOD OF PREVENTING IT.

Dr. Neil Macleod (*British Medical Journal*) asks: Does quinine excite contractions in the human pregnant uterus. He regards this question of great interest to medical men residing in malarious districts, who are frequently called upon to treat neuralgia and fever of malarial origin in pregnant women, and has been answered in the affirmative by French, Italian, and more particularly German and Indian medical men; and in the negative chiefly by American physicians, who maintain that abortion after quinine given in malarial poisoning, is the result of the latter.

In the later months of pregnancy, when the uterus is above the pelvic brim, pains can be easily ascertained by palpation to be accompanied or not by uterine contraction; but in the early months it is practically impossible to ascertain the existence of these contractions; and the subjective pains cannot be accepted as sufficient evidence of uterine action, even in pluriparæ, unless accompanied by blood discharge from the uterus. On the other hand, it is quite possible that many examples of this effect of quinine have been overlooked; as where "pains" have been present, but have not been severe, have been unaccompanied by blood discharge, or not followed by miscarriage or abortion; moreover it is not unlikely that the use of opiates in neuralgic cases, has interfered with the observation of the ecbolic effect of the drug.

The ordinary use of the opiates in threatening miscarriage suggested to me their administration before that of quinine in such cases, and the result was so encouraging, that I have, since then, used opium, morphia, and chlorodyne for this purpose, in several cases, and have no hesitation in prescribing large doses of quinine to pregnant women suffering from malarial fever, or neuralgia, or to reduce high temperature in other conditions.

BABY-STARVING.

The *British Medical Journal* summaries, in a leading article, the important conclusions of experienced observers on the great subject of infant-feeding, as aids to memory for the benefit of the overworked busy general practitioner:

(1) Milk received directly from the female breast is the natural food for infants. Every other kind of aliment must be regarded as artificial, even that drawn from the breast by mechanical means.

(2) The results of artificial feeding are usually much inferior to those derived from suckling; they may be improved, but can never equal the natural source whence the infant should derive its nourishment.

(3) During artificial feeding, the first rule to be observed is that relating to perfect cleanliness of all cups, bottles, etc., employed.

(4) The value of any artificial food will depend much more on the easiness of digestion than on the quantity of nutrition which it contains.

(5) In choosing as a substitute animal milk, we should select that which, in composition and the proportion of nutriment it contains, approaches nearest to human milk.

(6) The casein contained in different kinds of animal milk varies in its degree of digestibility, and the casein of female milk is more readily digested than that contained in cow's milk.

(7) Condensed milk is not to be preferred to fresh cow's

milk, when the latter can be procured from healthy animals fed on dry fodder.

(8) The addition of sugar to the milk is liable to promote lactic fermentation, and to increase the danger of infantile diarrhœa.

(9) Every kind of farinaceous food should be avoided during the first two or three months, because at that age the salivary glands of the mouth digest starch incompletely, whilst those of the pancreas cannot digest it at all.

(10) The majority of infants' food contains starch which has not yet been transformed, and hence it is unfit for infants.

(11) Liebig's soup is more easily digested by the infant than sweetened farinaceous liquids, because the fermentive element which it contains may assist the transformation of starch into sugar after ingestion of the food.

(12) Under an artificial system of feeding infants take in a much larger quantity of nutriment than they do while suckling.

(13) In the majority of cases acute infantile diarrhœa is produced by the formation of an acid in the intestinal canal.

(14) The green color of the dejections also arises from the presence of an acid in considerable quantity in the canal.

(15) Inasmuch as lactic fermentation may arise from either kind of sugar, this latter, as well as amylaceous substances, should not be employed during the course of infantile diarrhœa, whenever the stools are strongly acid.

A CONTRIBUTION TO THE STUDY OF THE MANNER OF TRANSMISSION OF SYPHILIS IN UTERO.

BY HUGO ENGEL, M. D.

After detailing several cases and discussing the views of former writers on the subject, the author arrives at the following conclusions: (1) If the father is syphilitic and has not been properly treated, his wife as well as the fœtus will be infected through him, the wife giving visible evidences, and the fœtus either still-born or soon dying. (2) If the mother, at the time of fecundation, is suffering from syphilis, and is during her pregnancy not treated properly, she will not give birth to a living child until, perhaps, after several abortions. (3) If the father had been syphilitic but treated properly, so that at the time of fecundation he showed no symptoms of the disease, the fœtus may be born healthy. A congenital form developed later in the child will easily be cured, and the mother will be affected by an obscure form of syphilitic diathesis with almost no symptoms; but she will be liable to cause syphilis in any other man with whom she may have connexion. (4) If the father or the mother was syphilitic at the time of fecundation, and if the mother is subjected during her pregnancy to a systematic treatment with mercury, the results will be similar to those in Case III. In both cases, the earlier the treatment and the more thorough, the greater the effect. (5) A mother carrying a healthy fœtus, but becoming syphilitic during pregnancy, will transmit the disease to the fœtus, the latter, however, evincing a greater vitality than if the disease had been transmitted at fecundation or within the first few days of its existence. Treatment has here a similar influence as in other cases. (6) A syphilitic child will not infect its own mother by nursing, but may do so to any non-syphilitic wet-nurse. (7) If a healthy woman married to an apparently healthy husband, both being young, aborts without any apparent cause, in nine cases out of ten this tendency to abortion may be cured, and the woman made to carry the fœtus to term, by subjecting her as well as the husband to antisyphilitic treatment, especially, however, the husband, who, even if he denies his guilt, is usually at fault. In regard to the treatment of syphilis, the writer expresses his belief in the use of mercury, and especially recommends that it be administered by inunction. For children he employs the following method:—From five to twenty-five grains of common mercurial ointment, to which have been added one hundred to twenty-five per cent. of cosmoline (according to age), are daily rubbed upon a bellyband, the latter not being changed during the whole course, but the abdomen being cleaned before each application with a little Castile soap and tepid water and then carefully dried. During treatment the state of the buccal cavity is to be well watched, and kept in a good condition by brushing or rinsing it with a moderately strong solution of chloride of potassium—not the chlorate, which is usually, but wrongly, applied for this purpose.—*American Journal of Obstetrics and Diseases of Women and Children.*—*Edinburgh Medical Journal.*

MISCELLANEOUS ITEMS.

Two cases of *Albuminuria* cured by *chloral* are reported in the *British Medical Journal* by Thomas Wilson, M. R. C. S. No explanation is offered as to how the chloral was followed by such results.

PRESERVATION OF URINE FOR MICROSCOPIC EXAMINATION.—According to Dr. Curtis, the addition of about four grains of chloral hydrate to three ounces of urine will preserve it for a month, if kept at ordinary temperatures.—*L'Independente.*

DANGERS OF IODOFORM DRESSINGS.—Iodoform is an excellent dressing for sluggish and fungous sores, but may be dangerous on large, recent wounds. König records thirty-two cases of intoxication from it, with nine deaths.—*Bull. Gén. de Thérap.*

A CORRECTION OF A CORRECTION.—The substance prescribed by Dr. Hake in his article in the March number and which we attempted to give correctly in our last number was *svapnia.* In the last number the proof of the miscellaneous items was not read by the editor.

THE number of years that a student has to spend at a medical institution prior to being admitted to examination for a medical degree, in various countries, is as follows: Sweden, ten; Norway, eight; Denmark, six and seven; Belgium, Holland, Italy, and Switzerland, six; Russia, Portugal, Austria and Hungary, five; France, England, and Canada, four; United States, two and three, Spain, two.

HEPATIC AND SPLENIC COUGH.—M. Trastour calls attention to the fact that a cough due to hepatic or splenic affection may lead, on account of the concurrence of symptoms simulating phthisis, to a diagnosis of the latter disease. In eight cases with bad cough, two occurred in malarial subjects; the others, on examination, showed engorgement of the liver. The cough disappears when purgatives, saline cathartics, mineral waters, quinine, etc., are exhibited.—*Revue de Med.*, January, 1883.

QUININE IN EAR DISEASE.—Dr. Voltolini (*Monatsschr. f. Ohrenheilk.*) says: The efficacy of quinine in these diseases does not need further demonstration; the question now is, not so much as to the use, as its abuse in therapeutics. He warns us against the enormous doses that are frequently prescribed, which, whether given at once or at intervals, are likely to provoke grave aural and ocular troubles. The troubles which these very large doses produce on the ear, and which may result in deafness, consists anatomically in hyperæmia, principally of the labyrinth.—*Ann. des Mal. de L' Oreille, du Larynx.*

DIAGNOSIS OF SPURIOUS CARDIAC MURMURS.—Dr. Rosenbach recommends the following simple means of determining the nature of any murmur. Firm pressure is made with the tip of the finger in an intercostal space at the point of maximum intensity of the murmur. In this way the portion of lung in which the murmur is produced is pushed away from the heart, and the heart itself is also pressed back, and is prevented from transmitting its pulsations to the lung with force sufficient to give rise to a murmur. The spurious extra-cardiac murmurs are thus greatly weakened or entirely suppressed, while no effect is produced upon the true cardiac murmurs.—*Transactions of the German Medical Congress*, 1882.

NEPHRECTOMY.—Mr. John Lloyd showed, for Mr West, before the Midland Medical Society, a kidney which the latter had removed through a lumbar incision. The patient, a boy, aged fifteen, received an abdominal injury in November last, which was followed by hæmaturia, development of a lumbar tumor, pus in the urine, and pyrexia. In December, the aspirator drew off fifty-five ounces of purulent fluid. This was repeated a week later, and followed up by a lumbar incision and the insertion of a drainage-tube. Eighty ounces of purulent ammoniacal fluid passed daily through the tube. As emaciation was rapidly progressing, nephrectomy was performed. The kidney was eight inches long, four broad, three thick, and weighed sixteen ounces.—*British Medical Journal*

DANGER OF PUNCTURING OVARIAN CYSTS.—Professor Zweifel relates a case in which dangerous symptoms, indicating acute peritonitis from the passage of material from a cyst of the left ovary, followed an exploratory puncture of the second largest needle of Potain's aspirator. The symptoms—pain, vomiting, and colapse—were so marked that laparotomy was immediately performed, and a large cyst removed. He found that a portion of the contents, about the size of a walnut, had escaped into the peritoneal cavity. The patient had no bad symptoms afterward. Though this was Zweifel's fifty-fifth laparotomy, an exploratory puncture in his hands has heretofore had no evil results. He thinks, however, that the puncture should not be made, unless ovariotomy can be immediately performed if necessary.—*Centralbl. f. Gynäkol.*

TRANSFUSION AND ETHER INJECTIONS.—In a paper read at the Academic de Medecine, Prof. Hayem related the results of his experiments in controversion of the accuracy of Prof. Verneuil's statement that transfusion is a useless operation, which may be superseded by hypodermic injections of ether. Having bled a dog almost to the point of death, he found that the injection of ether was attended with no durable effect, while transfusion produced a "true resurrection." When a large quantity of blood was withdrawn, the dilution of what remained by the transfer of the serum derived from another dog was also attended with the same success. The stimulation by ether only produces an increase in the energy of the cardiac contractions and a notable increase in the number of the pulsations, but does not give rise to any increase of the pressure of the blood nor of the rectal temperature.—*Gaz des Hop.*, December 21, 1882.

MICHIGAN STATE MEDICAL SOCIETY.—This society held its annual meeting at Kalamazoo, May 9 and 10. The attendance was large. However, there were but few papers read Grand Rapids was selected as the place for the next convention. The following officers were elected: President, A. F. Whelan, Hillsdale; Vice-Presidents, Drs. H. Tupper, Bay City, I. S. Hamilton, Tecumseh, H. B. Barnes, Ionia, Augustus Kaiser, Detroit. Judicial Council,—Drs. Foster Pratt, Kalamazoo; H. B. Shank, Lansing; S. P. Duffield, Dearborn. Delegates to the American Medical Association, Drs. Wyman, Book, Brodie, Connor, Walker and Shurley, Detroit; Dunster, Palmer and Breakey, Ann Arbor; Pratt, Kalamazoo; Southworth, Monroe; Smart, Hudson; Bennett, Coldwater; Andrews, Paw Paw; French, Battle Creek; Lewis, Jackson; Owen, Ypsilanti; Hurd and Dorkey, Pentwater; McCall, Lapeer; Hagadorn, Bay City; Jerome and Bliss, Saginaw City; Dickerson, East Saginaw; Johnson, Grand Rapids; Smart, Grand Haven; Shepard, Muir; Beebe, Manistee.

HERNIA REDUCED BY ELECTRICITY.—Dr. Suprunenko mentions an experience of interest in the *Wratsch* (Number XVII, 1882). A right inguinal hernia, strangulated for three hours, had resisted half an hour's taxis. A moderately strong induction current was then tried; the positive electrode being pressed against the tumor, while the negative was applied first against the lumbar vertebræ, afterwards over the umbilicus. The hernia at once began to diminish, and in less than two minutes disappeared entirely. Another case is given in the same journal (Number XL, 1882). An old man of eighty had suffered from a strangulated hernia for twelve hours. Persistent taxis had altogether failed though Dr. Pergamin kept it up for over two hours. The induction current was then used for fifteen minutes, the pole being applied to various parts of the tumor, but this also failed. The current being still maintained, he again attempted manipulation, and in two minutes the bowel returned into the abdomen with a gurgling noise.—*Centralb. f. Chirurgie.*

THE CURE OF STRABISMUS BY THE EMPLOYMENT OF GLASSES.—M. Boucheron recommends the use of corrective glasses in cases of convergent strabismus, an affection that is usually associated with hypermetropia or long-sightedness. The employment of appropriate corrective glasses must, however, be preceded, as Green recommended long ago, by the instillation of atropine to paralyse the accommodation, and the effect of the atropine should be continued for two or three months, if the case is seen at the outset; or for ten or twelve months if the affection has lasted some time. In fact, the employment of the atropine should be continued as long as there is any tendency to strabismus. The glasses ordered should be of sufficient strength to neutralize completely the hypermetropia present. When no further tendendency to strabismus is observed, the atropine may be discontinued, but the glasses must still be employed.

The strength of the atropine solution he uses is one part of the sulphate to 300 of water. If atropine produces any irritation, he uses duboisine. When strabismus is fairly established he resorts to tenotomy, but even after this is performed he instils atropine.—*Annales d'Oculistique.*

LIGATURE OF THE BILE-DUCT.—Beloussow has studied this subject under the direction of Cohnheim and Weigert. He experimented upon rabbits, guinea-pigs, and dogs. The longest time that any animal survived was eighteen days. The liver was jaundiced and slightly enlarged. In its substance were seen yellowish gray spots varying from the size of a pin's head to a pea. These were most numerous from the first to the sixth day. The microscopic examination showed them to represent a partial necrosis of the liver substance caused by the pressure of the bile. Around these nodules appeared a zone of re-active inflammation with the formation of young connective tissue in which were newly-formed bile-ducts. This new tissue gradually replaced the necrotic portions entirely. In this way is to be explained the cirrhosis of the liver observed by earlier experimenters (Wickham Legg, Charcot, Gombault, and others) after the ligature of the ductus choledochus. This occurred in entirely aseptic cases, and was in no way to be connected with any inflammation starting from the point of ligature and following up the course of the bile-ducts. Kelsch (*Rev. de Méd.*, 1881), records two cases where the retention of bile was followed by cirrhosis,—one following closure of the duct by cholelithiasis and cancer of the gall-bladder, the other in which a dilatation of the bile-ducts was found without any formation of concretions.—*Arch. f. exp. Path.* Volume XIV.

CANCER OF THE VERMIFORM APPENDAGE.—This affection is so rare that a case reported by Professor Thiersch deserves special mention. The particular case has a further point of interest, inasmuch as the tumor became very early adherent to the abdominal wall, and so was from the first supposed to be directly seated there. This view was strengthened by the absence for three years of an intestinal disturbance. At the time of admission to the hospital the tumor was as large as the fist, ulcerated on the surface, and pulsating with the iliac artery. It moved with the belly wall; and a funnel-shaped opening at the base of the ulcer admitted the finger into an internal cavity. This was taken for the lumen of the ascending colon, chiefly because an excised piece of the neoplasm showed that it was an intestinal adenocarcinoma. The operation which was undertaken proved very difficult, owing to the relations of the great vessels with the growth. The cavity in the tumor was then found to be continuous with the much dilated vermiform process. A tumor as big as a walnut was found at the junction of the process with the cæcum, and necessitated the removal of a piece of the intestine three inches long by an inch and a half wide. The patient died in thirty-six hours. *Postmortem*, a small quantity of effused lymph was found around the sutures in the intestine, no liquid effusion appeared, and the retroperitoneal glands were cancerous. Death resulted, therefore, from exhaustion.—*Berl. klin. Wochenschrift*, XLI, 1882.

A DOCTOR'S TRIUMPH.—While Professor Donald Maclean, the well-known professor of surgery in the University of Michigan, at Ann Arbor, was absent from home last summer, a most scandalous publication relating to that gentleman appeared in the Detroit *Evening News*. The article was of a most libelous character, and charged Professor Maclean with sustaining most improper relations with a lady patient whom he had treated a short time before. From the testimony, as published, the charges rest upon the most flimsy foundation, and the evidence relates only to conflicting and improbable circumstances. This evidence was elicited by a suit for libel, which Professor Maclean promptly filed against the paper containing the publication. The suit resulted in a verdict for the plaintiff, the jury placing his damages in the sum of twenty thousand dollars.

Every physician is liable to be menaced at any time with the ordeal through which Professor Maclean of Ann Arbor, has just passed. Actuated by various motives, such as a desire to extort money by blackmail and an innate love for scandal, there are in every community those who are ready to attack the most precious possessions of a popular physician—his good name and pure professional character. It is painful to record that these attacks are often aided and instigated by those in whom envy and jealousy have instilled their virulent poison. It is a notorious fact, too, that the object of these attacks is usually to extract money in the form of a compromise. To yield to such demands is a fatal mistake. The course pursued by Professor Maclean is the only one consistent with the protection of one's honor and self-respect. Certain newspapers are altogether too ready to give a doctor a conspicuous place in the sensational column where scandal reigns supreme. We commend most heartily the manly course adopted by Professor Maclean in all this trying affair. It is pleasant also to note the enthusiastic ovation accorded him by his fellow-citizens of Ann Arbor—an ovation in which the entire community participated—on his return home after the verdict was rendered. We can not at this moment recall any other instance in which a physician has been accorded a verdict in so large a sum as twenty thousand dollars. The vindication is complete, and the result will not be without its influences—influences which will be protective to physicians, and not without warning to would-be libelers.—*Louisville Medical News*.

THE

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ORIGINAL ARTICLES.

GERMS IN DISEASE.*

BY F. J. GRONER, M. D., BIG RAPIDS, MICHIGAN.

The subject which I have selected is a very important one in sanitary science. It is not a new one but like many others has made such rapid advances during the past quarter century that it is interesting to trace a part of the history. The doctrine dates back more than two centuries. Linnæus, the great botanist, thought the malarial fevers were due to cryptogamic organisms introduced into the system. It was impossible however to attain scientific facts until the microscope had reached a considerable degree of perfection, so that really the theory began to develop between 1840 and 1850.

For a long time it had been known that infusions, on being exposed to the atmosphere for a time, would teem with living germs. This caused the extensive investigations into the theory of spontaneous generation, carried on by Schulze and Schwann, which, by the way, have lead to great practical improvements in surgical science. It was at this time that Cagniard de la Tous discovered that yeast is a plant, and reproduces itself in fermentable fluids. The discovery of its real nature and the part it plays in fermentation gave great value to Schulze's and Schwann's results, suggesting that putrefaction and other kinds of decomposition may be due to new arrangement of elements brought about by the development of germinal particles deposited from the atmosphere. It was thirty years after Schwann established the connection between putrefaction and microscopic life when Lister made a practical application of it to wounds. Lister's application has enabled us to perform many operations which had been almost hopeless.

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* A paper read at a sanitary convention, held under the auspices of the State Board of Health, at Reed City, Michigan, April 26 and 27, 1883.

There are now great efforts being put forth to make the theory prove as useful in medicine as in surgery. There is great reason to suppose that many diseases, especially those of zymotic character, have their origin in germs of special organisms. We know that fevers run a certain definite course. The parasitic organisms are at first few, but gradually multiply at the expense of the patient, and then die out again. Some diseases appear to be generated by inoculation with fluids in which the highest power of the microscope fails to reveal any organisms whatever, and in other cases all that can be seen is granular matter, so minute in its particles that no forms can be made out. But if the next quarter century see the rapid advance in this field that has been made in the past many of these obscure points will be cleared up.

In order to make a practical application in a sanitary way we must understand the part germs play in disease. It is only with this scientific knowledge that we can combat intelligently and successfully infectious diseases. The theory is that all infectious diseases are caused by the vital activity of parasitic organisms. The question is very hard to reduce to exact science as the forces are numerous, subtle and complicated; circumstances greatly influence results so that it is often impossible to reach precise conclusions. The question was whether the micro-organisms were the cause or result of the disease. We may now consider that question fairly settled. The experiments in this field are leading to very brilliant results. The microbes contained in the blood tissues and secretions of certain infectious diseases have been cultivated, and after a time have been employed for inoculation, with the important result of reproducing the primary malady.

I will name some of the diseases produced by micro-organisms. Pasteur was the first to affirm the parasitic nature of septicæmia, and his observations have been confirmed by eminent scientists,—Coze, Feltz, Davaine, Hallier and Bechamp, Zuelzer, Sonnerschein, Riemschneider and other Germans attribute it to an alkaloidal poison. We are now quite certain that puerperal septicæmia is caused by a micro-organism. M. Chauveau has isolated the organism, cultivated it, attenuated it, and vaccinated rabbits; and the symptoms and lesions of puerperal fevers were produced. Coze and Feltz attribute small-pox to a bacterium; Luginbuhl and Weigert to a micrococcus. Scarlatina is attributed to a micrococcus by Hallier. Whooping-cough is a bacteroid disease—Dolan; diphtheria is attributed to a bacterium by Tigri, Oertel and Letzerich; typhoid fever to a bacterium; relapsing fever to a species of bacteria; hydrophobia has parasitic origin. In the edge of the inflamed area of erysipelas is found micrococci and they have been cultivated by Fehleisen. In croupous pneumonia small bacteria are found in the edge of the advancing inflammation. Cerebro-spinal-meningitis is of similar origin.

Pasteur says "it is in the power of man to banish parasitic diseases from the surface of the globe." If so let us spend a little time on a disease that in 1880 caused 38,398 deaths in the United States, 2,002 in the State of Michigan; and last year out of 299 deaths in Mecosta County 119 are attributed to this chief of destroyers—*diphtheria*. This is one of the diseases in which we will expect more from restriction. We must determine some method of annihilating the germs. There are a number of infectious diseases that soon will be prevented by inoculation just as small-pox now is. They must be diseases that recur but once in the same individual. The one attack exhausts the susceptibility of the system to another attack, such as scarlatina, whooping-cough, measles, etc.

The organism which causes diphtheria has been discovered, cultivated, its life-history has been studied. Scientific men are attacking it with antiseptics. Its vulnerable point will be reached. I have demonstrated that it yields to chloral hydrate. (THE PHYSICIAN AND SURGEON, Volume IV, page 199.) We must exercise the most diligent caution about spreading the contagion. All germs must be scrupulously destroyed. Then we may expect such a revolution in medicine as we have seen in surgery. Here is an example: Professor Nussbaum says "that previous to the introduction of Listerism in the hospital of Munich pyæmia always flourished there; that since 1872 hospital gangrene has been a constant, though unwelcome guest, so that in one year eighty per cent. of all wounds were attacked." He says "that erysipelas and gangrene were so prevalent in the building that it was the exception for a patient to escape an attack. It was a vertiable pest-house. Since introducing the antiseptic method, he says, he has not had one case of hospital gangrene, not one case of blood-poisoning and has abolished erysipelas altogether, and this change has continued uninterruptedly for five years."

We have reason to believe that the time will come when such magnificent results will follow our sanitary efforts.

With Koch's experiments as to the parasite nature of tuberculosis, you are all familiar. As to its infectiousness the following experiment by M. Giboux is very positive. He placed in two cages young rabbits of the same litter, from perfectly healthy parents as shown by postmorten examination. He caused them to respire daily for two or three months twenty to twenty-five litres of expired air from persons in the second andthird stages of phthisis, passing in the first case through cotton wool. The animals which were thus protected by cotton wool preserved their health as shown by autopsy, during the entire experiments, while the animals which inspired the infected air directly, soon lost their appetites, suffered from diarrhœa, became emaciated, and after death tubercles were found in the liver, spleen and apex of the lungs. Previous experiments had proved that by inoculation the contagion could be indefinitely transferred and reproduced. Koch says that one-seventh of the deaths of the human race are due to tubercular disease, and fully one-third of those who die in active middle age are carried off by the same cause. This disease must be regarded as eminently contagious. Dr. Arthur Ransome has announced before the Royal Society that he is able to discover the bacillus tuberculosis in the condensed aqueous vapor of persons affected with phthisis. As this is one of the diseases we can hardly expect to control by inoculation, we must by quarantine. In Germany phthisical patients are separated from others in military hospitals by imperial order, as carefully as small-pox patients. The effect will be very deleterious to the unfortunates who are affected, but we must look to the health of the future as well as the present.

We will speak now of some of our contagious diseases that ought to be prevented by inoculation. It is an established fact that small-pox is now completely within our control. Chavau has proved that the germ of small-pox has its counterpart in the germ of cow-pox, that the two diseases differ only in degree of intensity. Dr. J. W. Stickler has vaccinated twelve patients who never had scarlatina with what is supposed to be the same disease in the horse with the important result of protection against human scarlatinal poison. Pasteur has demonstrated on the lower animals that he can attenuate the virus by cultivation so as to protect by inoculation.

The census of 1880 shows 8,772 deaths from measles, 16,416 from scarlet fever, 12,202 from whooping cough, and 22,905 from typhoid fever, in the United States. With these figures before us it is hoped that we may soon reach results in these diseases equal to those of M. Pasteur in splenic fever as related by himself at the International Medical Congress in 1881. He says:— "Fifty sheep were placed at my disposal, of which twenty-five were vaccinated. A fortnight afterward the fifty sheep were inoculated with the most virulent anthracoid microbe. The twenty-five vaccinated sheep resisted the infection, the twenty-five unvaccinated died of splenic fever within fifty hours." We have no doubt the time will come when measles, scarlet fever and some other of our dreaded diseases will be under as complete control as splenic fever now is in France. M. Pasteur has recently presented a paper before the French Academy of Science on a disease that has been very destructive to swine.

He claims the parasite which produces the illness resembles the one that produces cholera in fowls, and that by inoculation with a diluted form of virus, protection is afforded. The disease is the one that kills thousands of pigs in this country yearly. If Pasteur can vaccinate so as to protect against cholera in chickens, splenic fever in sheep and pneumoenteritis in pigs, we think it time Pasteur turns his scientific skill to protect the human race against some of our dreaded contagious diseases. The first scientific step toward eradicating these diseases must bear knowledge of the nature of the contagion. When we once possess this knowledge the stoppage will be as certain as that of febrine, charbon, and malrogue, by Pasteur's experiments.

I spoke of Chauveau's cultivating the organisms of puerperal septicæmia and of inoculating rabbits with them, and reproducing the disease. The experiments as to the protective powers are not complete; but he states that rabbits which survive the first inoculations are not susceptible to subsequent attacks even when virulent virus is injected. Now that the precise character of the organism is determined, it is hoped that it may be modified by inoculation so as to produce a virus capable of producing a milder disease.

Here is another field. Whooping-cough is undoubtedly a bacteroid disease as Dolan has inoculated rabbits and induced a catarrhal spasmodic affection. We may be able by Pasteur's method to cultivate and produce an attenuated virus which by inoculation will render children insusceptible to the contagion.

There has been no malady which has so baffled the skill of the profession as hydrophobia. The germ theory now threatens to crush it. There is a period of incubation after the victim has been exposed to the poison. Experiments are now being made to see whether by inoculation after the victim has been bitten he may not be protected against the dreaded death. Pasteur claims to have four dogs which cannot be inoculated with rabies by any method. These dogs have been protected by previous mild attacks of rabies from which they recovered. When protection is once established it will be one of the great triumphs of the age. We think the time is near when we can have a vaccine to protect us against whooping-cough, measles, scarlet fever, etc., as well as against small-pox.

Physicians can do very much to prevent infectious diseases by frequently cleansing hands and instruments in disinfecting fluids. Many a physician has yielded his life by a slight abrasion of the skin during a postmortem. We can not be too careful about carrying these poisons as the germs have unlimited powers of reproduction. Every physician owes something to civilization. His scientific cultivation must not all be spent in earning a few dollars, or in trying to add a few years to decrepit old age. He must add years to childhood, by discovering a remedy to protect against these contagious diseases.

A CURIOUS CASE.

BY RALPH D'ARY, M. D., ROMEO, MICHIGAN.

On June 1, of this year, I received a telegram from a German farmer, H. B., in the town of Lennox, to come to his house. I found his wife, the patient, in bed, apparently much exhausted and considerably emaciated. Of this latter circumstance I was able to form an opinion as I had seen the woman a few months before. She was then a large, fleshy woman, with a full, florid face. Now her features had an anxious, suffering expression. The history, as near as I could ascertain it, was as follows:

She was habitually constipated, and like most German women hereabout, she had long been in the habit of using infusion of senna leaves. About *eleven weeks* before my visit, that is, about the 16th of March, she was suddenly taken with a severe spasmodic pain in the right hypochondrium, extending from that centre all around her, and upwards under the shoulderblades and into the neck, also downward into the right iliac region. The pain was most violent in the right hypochondrium and so severe that she threw herself down in the yard, where it had taken her. It caused a feeling of deathly nausea, a profuse cold perspiration and vomiting. After that it gradually wore away, and in half an hour it had left her entirely. But she felt very weak and sore all over her abdomen. After a time another attack came on and in this way she continued to suffer, the attacks succeeding each other more and more frequently, until she was compelled to stay in bed. The severity of the attacks also increased by degrees. At last the worst of them were ushered in by severe chills, followed by perspiration and vomiting. Her appetite was poor, and finally she was unable to retain any food. Every injection caused a return of the spasmodic pain, and the food was immediately ejected by vomiting. During this latter stage I was sent for. Soon after the first attack another physician had been sent for, who diagnosed uterine colic and neuralgia, or at any rate ascribed the disease to uterine causes, but made no examination. His remedies had not the slightest effect. How long or how often he attended her I am not aware. After seven weeks of intermittent suffering another physician from a neighboring town was called, who, according to the husband's statement, pronounced it a case of bilious fever, much to the astonishment of the patient and her husband, who most emphatically assured me that throughout the course of the disease she had no fever. It is barely possible, however, that they, being Germans and imperfectly acquainted with the English language, had misunderstood him, and that he may have told them it was bilious colic. I suggested this to them, but they stoutly denied it. I now proceeded to make an examination. The pulse was 70, weak, but even; the tongue was slightly coated with a whitish brown fur, came out trembling, looked sodden and bore the indentations of the teeth. It did not show the usual signs of gastric or intestinal irritation. The skinwas cool and too moist. I made a digital examination as to the position of the uterus and ovaries, in order to verify the first physician's diagnosis. From the character, location and duration of the pains, I did not expect to find the main trouble in the pelvic region, but thought that a possible complication from acute prolapse or congestion of the uterus or an ovary might possibly exist. But I found nothing of that kind, and to the touch everything appeared natural. There was indeed prolapse of the uterus, but as there was no local tenderness, heat, or dryness, I diagnosed it as a chronic condition, probably of many years standing. This the woman confirmed. I could therefore exclude this complication.

As she complained considerably that the pain was very severe in her back, from the right hypochondrium all around her and up into the neck, I carefully examined her spine, but could find no tender spot. Her urine had continued natural and *throughout the disease her bowels had moved as usual*, with the help of her usual doses of senna. I excluded spinal complications. Having now made sure of the absence of misleading complications I applied myself to the consideration of the main seat of pain, and having begun in my diagnosis at the wrong end, that is, by first supposing the presence of a disease and then searching for evidence of it, instead of first collecting all the symptoms and then at once diagnosing the right disease, I determined to proceed in the same manner. I therefore asked myself, before making an examination of the abdomen: "What could cause those pains?" The answers that suggested themselves to me were:

(1) Neuralgia (meaning idiopathic neuralgia, neuralgia without ascertainable local cause).

This diagnosis I at one decided to adopt only in the very improbable case, that everything else had to be excluded. I therefore proceeded.

(2) Biliary calculi.

(3) Renal calculi.

(4) Flatulent colic.

Here my wisdom, for the moment, gave out. Inflammatory affections, of course, were not to be thought of, neither lead colic, nor retrocession of gout to the stomach. Flatulent colic I excluded on the ground of the absence of flatulence, (according to the patient's words) and the persistent nature of the disease. There remained then the dilemma—renal cal uli or hepatic calculi. The extreme severity of the pains pointed in favor of gravel. The location of the principal pains, at the base of the thorax, in the hepato-cystic, epigastric, dorsal, and scapular regions, favored gall-stones. In renal calculi the severest pains ought to be in the renal, lumbar and inguinal regions. The absence of any signs of jaundice however militated against biliary calculi. So did the absence of bile in the vomit. The gradual decrease of the pain after each attack, with the total absence at any time of the sudden complete cessation of the pain after the exclusion of either gall-stones or gravel-stones, declared against either of the two, etc., etc.

In a word, I arrived at the conclusion that my diagnosis, so far, was as worthless as my manner of conducting it was faulty, and that physical exploration alone would reveal the nature of the case. Firstly I palpated the renal region, but could elicit no tenderness. The last prop of my renal theory was gone. I still clung to the idea of the biliary calculus. I first examined the abdomen and hypogastrium by superficial palpation. It was not meteoric, but soft and natural, and but very little sore. Now I pressed my finger down over the region of the gallblader, and had the satifaction of eliciting pain and meeting with something hard. "Eureka!" I thought, here is the distended gall-bladder! But the next moment my assurance had vanished, for instead of a round tumor with smooth surface, I found a large, hard and rather irregular one, extending across the epigastrium, and very sensitive to deep pressure. The thought of some neo-plastic tumor at once occurred to me, and cancer of the liver or colon as the most likely kind. I looked carefully at my patient. Worn and anxious as she appeared, she had not the cancerous complexion, jaundice did not exist either. I determined to explore further. Palpation and percussion alike showed a board-like hardness of the tumor, and that it extended also downward in the direction of the ascending colon. Here was a clue! I made up my mind it was an affection of the colon, transverse and ascending. I placed my patient in such a position that I could almost grasp a part of the tumor. I made gradual firm pressure; I felt the tumor yield, like a clod of drying clay, and it did not seem to assume its former shape. I now made up my mind and told the people that it was a case of impaction of fæces. They, being both shrewd and intelligent, at once objected that there had been an action of the bowels every day. I explained to them that sometimes the impaction assumes the shape of a drain tile, leaving a narrow central channel.

I prescribed a table-spoonful of olive oil every hour until copious evacuation should take place; also injection and retention, as long as possible, twice a day, through a large tube syringe, of at least a quart of soapsuds, till the same happy event. For the attacks of pain, considering the proximity of its principal seat to the stomach, I prescribed E. F. conii mac. m. v., to be taken ad rem natam, in a little water (and this afterwards proved very efficient). In order to obtain gradual and gentle action of the bowel I prescribed:

℞. E. F. Cascara sag.......................... f℥ij.
E. F. Belladonnæ,
E. F. Nucis vom.......................... āā mxl.
Tincture gentianæ comp.................. q. s. ad f℥iv.
M. S. One teaspoonful three times a day.

Diet: Milk and raw egg. Living at some distance I directed them to telegraph to me if anything went amiss, and promised to call in three days. I also ordered the husband to carefully dissolve and wash all the excreta in order to find a possible cause of the trouble. (In reality I had still a sneaking hankering after gall-stones, soothing my better judgment with the mental placebo that I expected to see them "only as a possible complication.")

On the fourth day I was met with a smiling face. All had gone as predicted. The fæces came away in round balls, "like potatoes." These had been carefully dissolved, diluted, strained, and in the filtrate were found a quantity of *raisin seeds*. The woman had eaten raisins (quite an event in a German family) exactly *thirteen weeks* previously to the day they were passed!—Alas, no gall-stones!

CASES FROM PRACTICE.

BY GEORGE W. ORR, M. D., CENTRAL MINE, MICHIGAN.
Surgeon to Central Mine, Keweenaw County.

Case I—Calculus; Lithotomy; Recovery.—Over two years ago I was called late one evening to see Willie H., about eleven years of age. His health was unusually good; but he complained at that time of retention of urine. I introduced the catheter and relieved him and requested his parents to bring him to my office next day or as soon as he was able. I examined his bladder with a sound; but was unable to detect any stone. He had a close adherent prepuce and the symptoms pointed to irritation of the neck of the bladder. I came to the conclusion that it was spasmotic retention and incontinence from irritation of the neck of the bladder. For the year following he had several attacks and I finally circumcised him, which seemed to give him but little relief. A few months later I examined him again with the sound. The point of the instrument became engaged at the prostate with something which had the appearance of stone, and by introducing the finger into the rectum the prostate was felt to be hard and to measure about three-quarters of an inch transversely and one inch at least in height. After the sound passed into the bladder it was perfectly free and did not come in contact with a calculus. I could come to but one conclusion, that is, that there was a deposit of lithic or phosphatic matter in the membrane lining the prostatic portion of the urethra. I gave him acids and the fluid extracts of hydrangea, which gave him considerable relief. Since that time up to February 24, I had no opportunity to examine him. However, Dr. Solis of the Allonez Mine examined him about February 15, and detected a stone of considerable size in the bladder. A few days later his father came to my office and requested me to operate on the boy. On February 24, with the assistance of Drs. Solis, Lawbaugh and Woolway, I performed the usual lateral operation. After he was under the anesthetic, we introduced the sound (he would not consent to its introduction before). I was surprised to find the prostate perfectly normal in every respect. The sound was easily introduced and came in contact with a stone of considerable size. The sound was withdrawn and the lithotomy staff introduced. After I had opened the bladder I introduced my finger, which came in contact with a stone which seemed to be attached to the fundus of the bladder and so large that it was utterly out of the question to remove it through any opening that it was safe to make. I introduced a pair of lithotomy forceps and grasped the stone by its lower extremity, which seemed to be about two inches from its attachment to the bladder, and where I grasped it, it was not less than an inch in diameter. It appeared to be very soft and the forceps crushed it readily at first but the center was very hard and could not be crushed. Then I found that where I supposed the stone was attached to the fundus of the bladder, that it was firmly grasped by a constriction of the walls of the bladder and nearly an inch of stone was above the constriction. We introduced a pair of incisor tooth-forceps and succeeded in crushing the stone. We took out all the fragments and washed the bladder out with warm carbolized water. We had consumed two hours time, and the necessary manipulations to remove the calculus had made an unusually severe operation of it, and fears were entertained that the little fellow would not be fortunate enough to pull through; but I am happy to say that he never had a bad symptom. There was no shock; temperature did not go above 100° Fahrenheit; pulse, not above 96 per minute, and he has now wholly recovered.

Case II.—Continual vomiting in Pregnancy, terminating fatally. —With the hope that some deduction of interest and value may be drawn from the following case of vomiting during the first four months of pregnancy, I am induced to report it as fully as time and circumstances will permit. Death from this affection is so *very* rare that but few practitioners are *unfortunate* enough to have a case to report and there are some very delicate points to be decided by the physician, who has a case of this kind on hand, and the responsibility and anxiety are certainly of no small weight. Authors are disagreed as to the production of abortion, several claiming that under no circumstances are we justified in inducing premature labor, and those who do claim that the induction of premature labor is justified, freely admit that cases that would warrant the operation are *extremely* rare. And just at what point as to time and the condition of the patient this operation should be performed is truly a difficult question to decide. If it could be possible to know just what would happen in a given case in the future, our course would be easily decided; but the future in cases of vomiting in pregnancy is as much covered to the physician as to the common observer, for no physician can say that vomiting will or will not cease.

About the 1st of June, 1882, I was called to see Mrs. M. E. W., age twenty-four. Her previous health had been generally good. She was of nervous temperament and a very intelligent lady of English extraction. She had never been pregnant. Had been married about two years. She complained of vomiting and it was not confined to any particular part of the day. The fluid ejected was mostly bile. Her appetite was very poor and she frequently vomited when she had not taken food. Her pulse was somewhat rapid; temperature normal, tongue clean, bowels regular. She had passed her monthly about a fortnight; but emphatically denied being pregnant, nothwithstanding I was quite confident that pregnancy was the cause of her distress; but I reserved my opinion for a few days. At the end of the first month I requested Dr. Lawbaugh to see her, although I had informed her and the friends that there was no doubt that she was pregnant, and Dr. Lawbaugh confirmed my diagnosis. She would not give it up but insisted that she was not pregnant. During this time she had lost strength and flesh. I had tried a number of remedies without the least relief. As much was done. to get her to take medicine and nourishment as could possibly be done without force. She was tempted in every way; but it was all in vain, and nutritive enemas were regularly used to sustain her. During the whole period of three months she continued to vomit and more than two months of the time she kept her bed with no disposition to help herself. The remedies used to allay the vomiting were too numerous to mention here; but I believe that most all means sanctioned by authority were used by stomach, rectum and by applications to the os. And on one occasion I used dilitation until the uterus began to show a disposition to resist any farther interference. I was in hopes we could carry her along until the end of third month or until quickening, believing if she could be sustained until that time, vomiting would cease and she would soon rally, and frequently told the friends that she would very likely get relief at the end of three months and if she did not get relief with the advise of another physician I would produce premature labor. At the end of the third month as I had predicted she was completely relieved and firmly believed she would soon rally. We all know very well that pregnancy is a stimulant to health in the great majority of cases and I had a right to expect that she would soon rally and give all concerned no father uneasiness. The uterus could be felt now above the pubis as large as a good sized cocoanut and yet she would not acknowledge herself pregnant. She would not make the least effort to help herself and just as persistently refused food. I never saw a patient so utterly devoid of desire to get up or to recover as she was. It is true she was weak and anemic, but I have often seen patients recover when far more exhausted from fevers. On Tuesday, September 10, I saw her in the morning and found her quite cheerful. For several days prior she had been complaining of a slight cough and a little embarrassment of respiration caused by pulmonary œdema. I gave her a prescription which seemed to relieve her and on the morning of the 19th she was quite free from any embarrassment of respriation. I was unable to see her until the evening of the 21st, when I found her very much worse and in a very critical condition indeed. Both lungs were very œdematous. Premature labor was out of the question. Her strength would not admit of any such procedure. Dr. Lawbaugh saw her the following day and frankly stated there was no hope.

We concluded that an emetic would perhaps unload the lungs and give her a little temporary relief. With that view we selected fluid extract of ipecac. It was administered in fifteen drop doses. After the second dose she vomited and this gave her immediate relief, which lasted several hours. The remedy was repeated in the morning, but she did not vomit, but seemed to get relief from her dyspnœa. About 3 o'clock of the 23rd, she complained of pain in the region of the uterus and I was quite sure the ipecac was producing results which we did not desire. However the pain became more regular and she seemed to brighten up and become more cheerful with the prospects of a miscarriage About 2 o'clock in the morning of the 24th, I delivered her of a fœtus at least four months developed. The loss of blood was insignificant and there was no perceptible shock. She was more cheerful than I had seen her for months before and remarked that she would soon recover now. I felt that her chance for recovery had increased. This condition of things continued until 9 o'clock Sunday morning ing, 24th, when she very sudddenly fell back and died, probably from syncope. It has always seemed to me that if she had used her will as I have seen women do, she could have kept quiet well nourished and very likely gone to full term. It was evident that she did not desire to have a baby and remarked to relatives that she would rather die. She lived nearly a month after she ceased vomiting. She had stimulants (the best of wines), well prepared nourishment and the best of care by her mother who is a first class nurse. She also had tonics; but all failed to produce either flesh or strength.

PLASTER OF PARIS JACKETS.

BY RALPH D'ARY, M. D., ROMEO, MICHIGAN.

I believe a few practical directions about applying plaster of paris jackets will not be unwelcome to practitioners. I have never read Dr. Sayre's book on the subject, but have read numerous extracts from it in various other books, of which at this moment I remember only "Heath's Minor Surgery and Bandaging," and the excellent instrument catalogue of Milburn & Williamson, of Detroit, Michigan. The Directions, as there given, in Dr. Sayre's own words, are not sufficiently distinct to enable anyone not acquainted with the process, to undertake it with full confidence of success, and I have found some modifications of the original process to be of advantage. In order to describe my method let us suppose we have diagnosed a case of spinal disease requiring the help of a jacket. And here, in passing, allow me to advise you, in proposing the jacket, *to ladies*, not to shock their sensibilities by calling it by such a vulgar name. It is too nearly associated with "strait jacket," or at best conveys an idea of putting on a garment intended for man. "Shocking! Not to be thought of!"

I always propose to apply a plaster *corset*, and a gracious smile of consent soon rewards my little ruse. Where is the woman that would not like to at least *try* a new style of corset, such as no other wears, and which is described as bracing her poor suffering back, and being of snowy whiteness, etc., etc.?

I shall not describe the apparatus used for suspending the patient, but shall only mention for the benefit of the poorer practitioner, that there is no necessity for paying from eighteen to twenty-two dollars for it, as quoted in the catalogues of a certain class of people who make it a specialty to exploit the medical profession. I have an excellent apparatus of the kind, made here in the village by a harness maker, a wagon maker and a blacksmith, under my directions, which cost me six dollars. The blocks or pulleys should consist of two ordinary blocks, a four-wheeled one above and a three-wheeled one below.

This kind of pulley will allow the patient more standing room than the kind in which all the wheels are fastened in the same block, and are placed one under the other, as pictured in catalogues.

The first important question that occurs to the physician is: *What materials must I get?*

Plaster, of course. But all kinds of plaster will not answer the purpose. Get the best "Dental Plaster," such as dentists use for taking impressions. Get five pounds of it, at five cents a pound.

Next—*What kind of cloth for the bandages?* Do not get mosquito netting, or cheese cloth, as recommended by Dr.

Sayre, unless you wish to have no end of trouble. The netting, even the finest of it, is too open to hold the plaster well. The cheese cloth, unless previously starched by your laundress, will be very difficult to cut, as it is too soft and elastic. Get *butter-cloth*, which is light, sufficiently close, and starched.

How much of it for a jacket? For an average sized patient—six yards and a half. Cost—seven cents per yard. Fold it up double and cut it in two pieces, of three and one-fourth yards each. Leave the two pieces together and double them up a second time and a third time, and you will now have a package of less than a yard wide and as long as the width of the cloth. Lay this on a board, take a shoemaker's "cutting knife," or a sharp pocket knife (jackknife) and cut across in fourteen or fifteen strips, which will give you as many bandages of three and one-fourth yards each in length and of the most convenient width. Then put on an apron, or any piece of cloth that will protect your vest and pants from the plaster; take off your coat, roll up your shirt-sleeves, and you are ready. Spread a large newspaper on the table and empty your bag of plaster on it, near your right hand. The bandages had best be first rolled up separately, as for surgical use. Take one end of a roll and place it near you on the paper, unrolling it away from you towards the side of the table opposite to the one at which you are seated. Hold down the end of the bandage with your left hand, take a handful of plaster with your right and heap it on the bandage. Then take a bone spatula, or the blade of an old dinner knife, with the shoulder and handle cut off, and spread the plaster smoothly along the bandage, as far as it is unrolled. One move of the hand is sufficient to accomplish this. Roll up the spread portion carefully, so as not to spill the plaster, unroll more of the bandage and spread again, and so on until the whole bandage is rolled up with the plaster between its folds. Place the rolls in some convenient vessel, for instance a little tin pail, ready for use. In this way you will make all your bandages in from two to three hours. An intelligent office boy, or a devoted little sister, or wife, can do all this for you, if you chose. You will, no doubt, have noticed that my directions differ from those of the esteemed inventor of the plaster case, who directs the plaster "to be *rubbed* into the bandages with the hand." Let us reason: Our object is to provide the patient with an unyielding supporting case for his trunk. Plaster is the material chosen. The bandage is merely the means of conveying the plaster to its place around the body, to hold it there until it sets, and also to resist the strain of internal pressure against the jacket. Very few bandages would be sufficient for the latter purpose, if they could only be made to hold a sufficient quantity of plaster. If we "rub the plaster into the meshes" only, we would have to use a great many more bandages, and consequently keep the patient suspended longer. My method I believe to be preferable, because the bandages are prepared more easily and more quickly, and more plaster is conveyed round the patient's person with every bandage.

On the mode of application I have nothing to add to the original directions, except cautioning the physician not to apply it too high under the arms.

I will say a few words about the seamless shirt recommended to be worn by the patient, and costing two dollars. In the præxis aurea, a dollar or two more or less of expense is of no account, but to a poor patient it may be an object. To such I recommend to get a piece of gossamer cloth, or even cheese cloth, to have it wrapped once round their body, from the axilla down to the middle of the thigh (for the sake of propriety), and to stitch it together where the edges meet in such a way as to have them overlap each other, avoiding a cord-like seam. Or a *man's* gossamer undershirt (cost thirty to fifty cents) may be used. Buy a larger size than the patient would need, have her rip open the seams, then have her draw it tight around the body, overlapping the edges and stitching them together in that position. Such a seam causes no inconvenience. Of course all this should be done by the patient's friends before she comes to the office. I direct ladies to get a *man's* undershirt, in order to avoid having the seams around the mamma, which are usually found in ladies' gossamers.

There is sufficient elasticity in the gossamer cloth to allow room for the female form.

After the patient has been released and the "corset" has set I proceed to *trim* it. For this I need only a sharp jacknife and a pair of scissors. The plaster shears, sold at the monstrous price of seven dollars, per catalogue (worth *at most* three dollars and fifty cents) are next to useless. It is generally necessary to shape the corset a little under the axilla and in the groin, and the uneven edges should be neatly trimmed off all round. After that is done, the gossamer shirt is cut all round the edge of the jacket, above and below, allowing it to project about one inch. This edge is turned back over the edge of the jacket and pasted down, with common starch paste. Thus the patient wears no longer a gossamer shirt with a plaster jacket over it, but only a plaster jacket with a gossamer lining. Another turn of the plaster bandage is then put over the turned back edge of the gossamer lining, for the sake of neatness of finish. In this way we get quite a neat and shapely corset, with bound edges, Some of my patients are quite proud of their pure white, tidy, and smoothly finished prison. One of them said, if she had to be a lobster, she might as well be a tidy one. Another, with an æsthetic and humorous turn of mind, laughingly told me she was going to have an Oscar Wilde rose painted al fresco on the jacket in front, and a Jersey Lily behind!!

TRAUMATIC ANEURISM OF THE TEMPORAL ARTERY.

BY H. C. PADDOCK, M. D., BATTLE CREEK, MICHIGAN.

Some months ago, a little boy, three and one half years old, was brought to my office with a large tumor of the head, extending from the right frontal eminence, back to the middle of the superior portion of the parietal bone. The length of this tumor was four inches, and its width three inches, besides there was a large amount of swelling back to the occiput. The history of the case was as follows: About one week before, the child fell, striking its head against an iron pump. The part began to swell and the parents, thinking it a simple bruise, did not give it much attention, with the exception of a cold compress. In a few hours the child ceased to utter any word of complaint but every day the tumor increased in size, and by the end of a week it was as large as a coffee cup, and the tissues were stretched to their utmost capacity. About the time they consulted me the child became very restless. This was followed by stupor. This alarmed the parents and they thought best to seek medical aid. I diagnosed the case as an aneurism of the anterior temporal artery. Thinking the tumor might contain pus, I thought best to explore it, and made a small opening (about three lines in length) in the base of the tumor. Immediately there was a free flow of arterial blood, and although the opening was small I found it large enough to satisfy me. I drew off after compressing the artery with my finger, about six ounces of blood. This greatly reduced the size of the tumor and immediately the stupor disappeared. I then stitched up the wound and taking a small bone coat button, covered it with a little absorbent cotton and pressed it firmly into the interspace between the neck of the condyle of the lower jaw, and the external meatus, applying pressure and retaining it in position by a roller bandage (with the application known as the cross of the chin). This had the desired effect of producing complete compression of the artery and on the third day I removed the compress and opened the previous wound. There escaped a large quantity of dark blood. I enlarged the opening about two lines more and washed out the tumor with a weak solution of carbolic acid, (a large coagulum had formed). I then closed the opening and the following day repeated the treatment of washing out the cavity, breaking up the clot by manipulation, and in two weeks time discharged the patient cured. This to me seemed to be a unique and interesting case, and the line of treatment appeared to be all that could be desired.

Had I made a free opening and proceeded to tie the artery, I am quite sure there would have been a different termination of the case considering the age and condition of the patient.

CLINICAL NOTES FROM THE DRESDEN LYING-IN HOSPITAL.

BY M. E. PAGELSON, M. D., DRESDEN, SAXONY.

VAGINAL HEMORRHAGE IN INFANTS.

During February and March of this year there occurred here four cases of this kind. In the first case the discharge lasted five days, was bright at first and gradually grew a little darker. The breasts were slightly swollen. In the other three cases the hemorrhage was very slight, bright colored and lasted three to four days; the breasts were not enlarged. Unfortunately the mothers were dismissed on the tenth day after confinement, so the further history of the cases could not be traced.

Enlargement of the breasts, accompanied by secretion of a slight amount of milky fluid is not very uncommon in infants and occurs both in male and in female children. During the past four months I have noticed at least six cases here, still that is a very small percentage, since over four hundred births took place in that time.

VESICO-UTERO-VAGINAL FISTULA.

The patient, forty years old, had been confined a number of times (seven) without artificial aid. The last child was very large and was delivered with forceps. A few days after, patient noticed incontinence of urine. She came to the clinique in March and the first operation was performed March 20 according to Simon's method. The patient was placed in exaggerated lithotomy position. The cervix was divided vertically, thus converting the two fistulæ into one and at the same time rendering them more accessible. The edges were pared and united transversely. Silk sutures were used. Milk was injected into the bladder after the operation and did not appear in the vagina, showing that the edges of the wound were accurately joined. The patient was catheterized three times a day. Some urine passed spontaneously. For two days everything went well, after that there was again complete incontinence and on April 2 all the stitches were removed, the patient having received no benefit.

About four weeks were necessary to fit her for the second operation. This time the edges of the wound were joined vertically, that is, antero-posteriorly as regards the pelvis, and *fil de Florence* used for sutures. The urine passed completely by the natural channel for nearly a week, and the wound united nicely with the exception of a minute spot in the upper angle. Through this there was very slight dribbling when patient was lying down. At the end of a week some of the sutures were removed, the rest after ten days, and then the ununited part was twice touched with a red hot iron. After the first time there was some improvement and after the second the spot entirely closed. The patient was dismissed on the 26th of May, a perfect cure.

A CASE OF ABDOMINAL PREGNANCY.

The patient was sent in for the operation of ovariotomy. There was a tumor in the right iliac region, growing somewhat rapidly. Menstruation had been absent eight months. Professor Winckel considered it a dermoid cyst of the ovary but called attention to the possibility of extra-uterine pregnancy, though this seemed to be excluded since the size of the tumor did not correspond with the period of amenorrhœa, and heart sounds were not heard. An exploratory puncture through the abdominal walls yielded no results. The patient felt comparatively well for the first three days after the puncture, then complained of pain in the abdomen and developed a general peritonitis. Ice bags on the abdomen and quinine internally were prescribed, and she seemed to be getting better, but then grew suddenly worse and died in about three weeks.

Autopsy showed the intestines extensively glued together by peritonitic exudate. In the right iliac region was a sac of false membrane which contained a macerated fœtus corresponding in size to the fifth month. The placenta was situated on the anterior wall of the sac and was adherent to it anteriorly and superiorly, as were also numerous coils of small intestine. The fallopian tubes were normal, ovaries not enlarged. In the slightly enlarged uterus there was a perfect decidua. The kidneys were hydro-nephrotic, supposed to be due to pressure on the ureters. They were twice the natural size, their pelves and the upper third of the ureters very much distended, and the uriniferous tubules, especially the straight, filled with pus.

EDITORIAL BRIEFS.

ALUMNI MEETING.—The Alumni of the department of medicine and surgery of the University of Michigan, will hold their annual meeting, June 27, 1883. Quite a large attendance is expected, as the class of 1879 holds a reunion this year. All Alumni will be cordially welcomed. The faculty will give a reception in the evening.

THE AMERICAN MEDICAL ASSOCIATION.—The Cleveland meeting was one of the most pleasant ever held by the Association. The attendance was large and perfect harmony prevailed. No one seemed to have "an ax to grind." There was but one opinion as to the code, and that was that no change is at present necessary. The people of Cleveland manifested their hospitality in a most generous manner. Citizens in great number opened their houses for entertainments and all seemed determined to give the doctors a royal reception.

The work done by the society was about the same in quality and quantity as that done at other meetings. In some of the sections a few excellent papers were read and discussed. Many worthless ones were also read and discussed. One of the sections, that on State Medicine, took up the greater part of the time in discussing some wordy and worthless resolutions offered by a member, and on the last day the resolutions were voted down. There is great need of some original investigations in this department and we hope that another year will see something of value done in this line.

The association decided to try the experiment of establishing a journal. It will be a weekly of thirty-two double column pages and will be under the editorial management of Dr. N. S. Davis, of Chicago, assisted by a Board of Trustees. Dr. Davis is well suited to the work, and we hope to see the journal take rank with that of the British Association. In order to do so however, it must be free from all sectional strife, and it remains to be seen if our profession can sink all petty jealousies for the common good.

The feeble health and infirm voice of the most honored president, Dr. Atlee, of Pennsylvania, rendered much that he said unintelligible to the majority of the large audience. His address was one of great interest, giving his reminiscences of the old times when he was a beginner in medicine.

Dr. Austin Flint was elected president, and Washington, District of Columbia, was chosen as the place for the next meeting, the first Tuesday in May, 1884.

CORRESPONDENCE.

BERLIN NOTES.

BERLIN, GERMANY. MAY 12, 1883.

EIDTOR OF THE PHYSICIAN AND SURGEON:—In response to a request by Professor Palmer, to write something of the Berlin news to THE PHYSICIAN AND SURGEON, I have concluded to give you a few of my observations which if you find interesting enough or if you have vacant space to fill out, you may use. I have, however, neither the time nor the ability to write an elaborate article; but having lately paid some attention to gynæcology I will in this branch mention a few things in which our German colleagues either differ from our American practice, or believe themselves in advance of the same. The latter they really do in their treatment of chronic metritis, which they claim to bring to a complete cure in a vast majority of cases. The treatment consists in amputation of the cervix uteri which is usually immediately preceded by the use of the curette, this amputation will, according to their theory, produce a subinvolution of the enlarged organ similar to that which happens after parturition and they sneer at Emmet when he says that such an operation is to be considered as malpractice for any other except malignant disease. I have taken much interest in the cases so treated, which are numbered by the hundreds in most of the principal gynæcological clinics here, but I am not yet prepared to say more than that a goodly number of cases which were so operated upon seem to have improved both in general health, and as to their distressing symptoms. I have, however, seen cases which, several months after the operation, had not regained their previous health and in which the organ was not reduced in size except, perhaps, by the piece which was removed at the operation! Emmet's operation has almost entirely fallen into disuse. Where an operation for lacerated cervix is needed, they remove the cervix entire instead, unless no diseases of the cervical mucous membrane is present, and the cervix is not enlarged. In such case, Professor Martin says Emmet's operation has its useful and only place. But that is almost as good as to say that it has no place at all; for if the laceration don't give rise to any symptoms, the operation is not likely to be carried out simply as a prophylactic measure, except immediately after labor, which cases belong to the obstetrician, and for which the operation was not devised.

It is, however, in laparotomies, and their results, that the operators, principally Schroeder and Martin, have the most reason to be proud. These gentlemen have both series reaching now almost to one hundred consecutive cases, without a death. Martin has also made over fifty consecutive total extirpations of the uterus per vaginam without losing a single case. His success bids fair to exceed any statistics on record. These excellent results are not so much attributed to any special mode of operating, as to the scrupulous antiseptic precautions used, and it is only since these have been so thoroughly carried out that the results are so uniformly favorable. Having seen many of the cases myself, I can say that they are by no means selected ones. In fact, and especially, Dr. Martin operates on any and all tumors, regardless of their character, often without any definite diagnosis. That there is a tumor in the pelvis or abdomen is quite enough. I have learned to admire him as the boldest, and one of the most perfect and successful operators in this city. To his series of seventy or eighty cases of consecutive recoveries are many malignant tumors, quite a number of supravagnial amputations for uterine fibroids, also one Porro's operation in the seventh month.

The antiseptic measures in laparotomy operations are principally, according to Lister, only more painstaking, especially in reference to cleansing the patients, the operating room and the instruments, and indeed the operator, assistants, and visitors too. No one can be present at such an operation, unless he can avow that he has not been near any septic matter for some days previously. He must take a full bath before the operation and wear clean linen and Sunday-suit throughout. Spectators are allowed only after complying with these rules, and in very limited number. The use of the spray is so thorough, that one can hardly see more than one or two feet at a distance, indeed I have often been completely drenched and felt more as if coming out of a vaper bath, than from an operating room. In ovariotomy the cyst is simply punctured with a bistoury, it being a rule to use no trocar or any other instrument that is in anyway difficult to cleanse.

As a suture and ligature, silk is used to the exclusion of all other material. In supravaginal amputations for fibroids the hemorrhage is controlled by a temporary ligature of elastic tubing around the uterine neck and after securing the uterine artery, the uterus is exised in wedge form, above the ligature and the wound stitched together by strong, deep and superficial sutures which bring the peritoneal edges perfectly close together, as manv as sixty or seventy sutures being used to secure the stump, which is of course treated intraperitoneally, drainage being secured through Douglas' sac. I have, since I have been here seen some twenty-five such operations, every one successful.

Very good results are also obtained here by operations for prolapsis which are very common. Shrœder follows Hegar; Martin modified this operation on the posterior vaginal wall somewhat, and has uniformly good results. I may perhaps say something more about these if I have occasion to write again. To-day is the opening of the Hygienic exposition.If I feel myself equal to the task I will give you some description of the important features another time.

Very respectfully yours,

KARL VON RUCK, M. D.

TRANSLATIONS.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.

BY RALPH D'ARY M. D., ROMEO, MICHIGAN.

ENTROPION.

Professor Hodin, of Kieff, calls attention to his modification of the Watson-Yunge operation for cicatrical entropion of the upper lid, occurring as a sequel to trachoma. The numerous methods of operating on such lids sooner or later result in relapse, not excepting the most popular method of Esche-Arlt. Professor Hodin's operation is as follows: The edge of the lid is split longitudinally into two plates, the upper one carrying the lashes. Another incision is made through the skin of the lid and down to the tarsal cartilage parallel to the margin of the lid, but not so near the border as to meet with the first incision in the thickness of the lid. The marginal piece inclosed between these two incisions is then cut through at both ends by vertical incisions and the ends are for some distance separated from the lid by prolonging the ends of the first incision farther into the substance of the lid until they meet the ends of the second incision. The little marginal piece inclosed in the four incisions now presents a flap at each end, whilst its middle part is still connected with the rest of the lid. At a distance of three or four millimetres from the second or cutaneous incision a third longitudinal incision through the skin only is made. Thus there is obtained between the second and third longitudinal incisions a bridge of skin about three or four millimetres wide. This is separated or raised in its middle part from the subjacent tissue, but retains its connection with the lid at both ends. This little bridge of skin is now drawn down and placed inside the first incision, which pushes the piece carrying the lashes upwards into the place formerly occupied by the bridge of skin. The little flaps are then properly adjusted and the piece carrying the lashes is secured in its new position by four or five stitches. In order also to secure the bridge of skin below the lashes it is fastened by one stitch in the middle to the piece carrying the lashes. If the patient is an out-door one, a compress with a four per cent. solution of boracic acid is applied. The sutures are of catgut. The main advantages of this method are: (1) It removes the trichiasis without causing any deformity and is an absolute guarantee against relapse, even if the mucous membrane should continue to contract by cicatrisation, for the lashes are removed to a considerable distance from the eye; (2) The desired effect is fully attained without removing any of the integument of the lid. Therefore this operation may be performed even where there exists already a shortening of the skin, as after the operation of Esche–Arlt. In October, 1882, Professor Hodin performed seven operations after this method, and only in one case gangrene of the transplanted skin took place. It is important to guard against having the upper band of skin too narrow, and to handle it very carefully during the operation; of course the material for the sutures must be of the right kind and size, and the after treatment such as would insure union by first intention. In order to lessen irritation, the author intends in future to use metal sutures instead of catgut, and iodoform instead of boracic acid. In splitting the margin of the lid great care should be taken that no roots of lashes be left on the lower edge (the tarsal cartilage), excising them separately if necessary; otherwise the lashes will grow directly towards the eye.—From an abstract in *Vratch.*

CARDIAC REMEDIES.

The following highly interesting table on the action of various drugs on the cardiac apparatus is from the second edition of Professor G. Sèe's work: Diagnostic et Traitement des maladies du coeur.

PARTS ACTED ON.	EXCITORS.	PARALYSERS.
Cardiac muscle.	Digitalin. Iodal (small doses). Camphor. Caffein.	Digitalin (second effect), emetin. Copper, Barium, and potassium salts. Chloral, (in large doses,) scillain.
Cardiac motor centres.		Saponin (last effect). Iodal (in large doses).
Cardiac inhibitory centres.	Muscarin.	Atropia. Fabarin. Spartein (large doses) Pilocarpin (secondary effect).
Intra cardiac plexus of inhibitory fibres of vagus.	Nicotin, Pilocarpin, } first effect. Calabar bean.	Pilocarpin (secondary effect).
Trunk of vagus.	Aconitin. Nepalin.	Spartein. Nepalin (second phase.)
Plexus of accelerating fibres of sympathetic.	Apomorphin.	Spartein.
Inhibitory centres of medulla.	Digitalin.	Chloral. Croton Chloral.
Vasomotor centre.	Bromide potass.	Prussic acid.

—*Medical Oboze.*

OZÆNA FETIDA.

[ABSTRACT FROM A PAMPHLET BY I. V. ZINOVIEF.]

The author's object is to reconcile, if possible, the various contradictions concerning ozaena found in medical works and to point out well-tried remedies for its cure. Ozaena must be considered a local infectious process, and the fetor is the consequence of the decomposition of the nasal secretion under the influence of the ferments contained in it. The disease has two stages: the hypertrophic and the atrophic, the latter being the consequence of the first.

During the hypertrophic stage the mucous membrane of the nose is in a condition resembling that of chronic rhinitis; it is hyperaemic, red, solid or sodden; the swelling attacks preferably the turbinated bones, and of these more especially the inferior ones. Respiration through the nose is thereby interfered with and sometimes altogether stopped.

In the period of atrophy the nasal cavity seems much enlarged, from the atrophy of the mucus membrane lining it and from the lessening of the inferior turbinated bones. During the first of the above stages the secretion is very abundant; during the second it is scant, but not easily got rid of. Hence the nose in both periods is full of secretions, which readily dry up into crusts. But whether dry or moist, the secretions are equally fetid.

A further symptom of ozaena is a feeling of dryness in the throat, especially on waking or after prolonged talking. The sense of smell also is dulled.

Ozaena occurs in the cachectic with no more frequency than in persons of apparently blooming health. Its course is always chronic; the transition from one stage into another is gradual and almost imperceptible, occupying several years. The disease begins like a common "cold in the head" with a "stuffing up" of the nose, with mucous or muco-purulent secretion, without fetor. Under favorable conditions this affection soon passes off; otherwise it continues, with remissions, for years, until it assumes the form of ozaena; and the longer it lasts the worse is the fetor. The distinction of the stages of ozaena is unimportant, for the difference between them is not qualitative, but only one of degree, for example: more or less fetor. For under the name ozaena should be understood simply the morbid quantitative and qualitative alterations of the nasal secretion due to the action of a ferment, no matter whether there be enlargement of the nasal passages from atrophy of the mucous membrane or not; or whether ulceration be absent or present. If the terms ozaena syphilitica, scrofulosa, etc., are retained at all, they should be understood to express only the etiology of the disease and not any special group of symptoms.

Ozaena may be complicated by invasion of adjacent cavities, such as the labyrinth, the antrum Highmorianum, and occasionally even the frontal and basilar sinuses. More frequently the naso-pharyngeal cavity and the pharynx, and subsequently the middle ear, are affected. An important etiological momentum in the infection of the ear is the irritating properties of the gases developed from the nasal secretion, which enter the tympanum through the Eustachian tube.

Females are attacked more often than males, from the age of seven to fifty years; but where syphilis is inherited ozaena may develop soon after birth (Schaeffer); scrofulous ozaena occurs from the age of nine till twelve years; the greatest intensity of the disease generally occurs before the age of twenty. Ozaena is generally developed in subjects affected with some dyscrasia, especially the scrofulous, next the syphilitic; but it occurs also in otherwise healthy persons. Putrefactive processes in the buccal cavity, according to Ziem, are an important cause, and the author has seen a case of unilateral ozaena on the side of a carious tooth. The explanation of causation is the same as in case of infection of the ear, namely: the gases resulting from the carious tooth penetrating into the nasal cavities by way of the posterior nares and setting up the disease there.*

In some cases foreign bodies in the nose excite ozaena, even when they are soft and do not excite acute inflammatory reaction. In these cases they simply prevent proper ventilation of the nose and retain the secretions until they decompose. The ozaena in these cases is generally limited to the obstructed side of the nose, the other side either remaining healthy, or suffering from simple catarrh. Inveterate ozaena is inefctious.

Prognosis in ozaena is favorable so far as life is concerned, but it frequently interferes with digestion and thus causes anaemia. In considering the probability of a cure it will be necessary to take into account not only its duration in the past, but also its etiology and the parts invaded.

Treatment.—In order to get rid of the fetor, the decomposing nasal secretions should be carefully removed, which can be done either by syringing with the ordinary piston syringe or by using the nasal douche. Neither should be used with too much force, and the patient should either sit or stand. The temperature of the water should be from 26° to 28° Remaur (90° to

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*This seems a very far-fetched explanation. Indeed it refutes itself, for if the gases arising from a decaying tooth really caused nasal ozaena they would cause it in *both* nasal cavities, as in ascending the naso-pharyngeal space they would by the property of diffusion inherent in all gases, and aided by the air-currents generated in respiration and deglutition, necessarily enter *both* posterior nares. If therefore *both* nasal cavities are not affected, the gases do not carry the infection. Infection by continuity of tissue would seem to me a much more reasonable explanation, if it be asserted (wrongly, as I believe) that ozaena is purely a local disease, independent of a constitutional dyscrasia. If it be admitted that a dyscrasia cause the disease, there can be no advantage in trying to find an explanation why this or that particular spot of the respiratory tract should be attacked in preference to an adjoining one. If indeed there existed any causal relation in the case above referred to, between the caries of the tooth and the unilateral ozaena, I would suggest a different explanation, basing it on the well-known and well-sustained arguments of similar cases by John Hilton, in "Rest and Pain" (especially the article "Furred Tongue on one side caused by a decayed tooth on the same side." In doing so I assume that the decaying tooth was in the upper jaw, since the author does not state its location. This tooth would be likely to irritate the

95° Fahrenheit. In order that the fluid should not enter the ears through the Eustachian tube, the patient should neither breathe, swallow, nor talk during the douching.*

The end of the nozzle should not be introduced into the nostril farther than half an inch. It should be held in a horizontal direction and close to the septum. Some vessel should be held under the other nostril to receive the returning fluid. If any fluid should enter the Eustachian tubes, Politzer's method of inflation should be used to force it out by forcing in the air. The syringing or douching should be done one, two, or three times a day according to the quantity of the secretion. If any crusts adhere to the walls of the meatus, they should previously be softened, by applying a solution of soda in glycerine (grains, five to fifteen in fluid half ounce). The fluid for the douche or syringe consists of a weak solution of carbonate of soda or chlorate of potash; about six to eight grains to a tumblerfull of water at first, and a little stronger afterwards; or six to twelve grains of permanganate of potash to the ounce of distilled water, about thirty drops of this solution to be added to a glass of water; or weak solution of sea or table salt may be used.

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gum and the anterior or large palatine nerve branch of the spheno-palatine ganglion which supplies the gum and also gives off branches which supply the middle meatus, and the middle and inferior spongy bones. Now an irritation of one terminal nerve twig may cause irritation and disease at the area of distribution of another terminal twig from the same parent-branch—in this case the turbinated bones, that is, the favorite seat of incipient rhinitis or ozaena. A still more evident connection between the teeth and nose is established by the anterior dental branch of the superior maxillary nerve. This nerve and the *posterior* dental branch of the superior maxillary nerve are continuous, forming a loop, and may therefore justly be considered as one and the same nerve. We see farther that the inferior meatus, and inferior tarbinated bones are supplied by filaments from the anterior part of this loop. It is therefore evident that any irritation of the upper teeth might cause first irritation and then disease in the inferior meatus and spongy bone, that is, at the very spot where ozaena first gets its foothold.—D'Ary.

*There is no necessity to hold the breath, and if the patient were to swallow or talk whilst taking the douche, the fluid would simply run down the pharynx and esophagus, and would enter the Eustachian tube only under very exceptional circumstances, notwithstanding the fact that the normal tube opens during the act of swallowing. One of the posterior nares would always afford a readier exit, being wider and on a lower level than the orifice of the Eustachian tube, and the latter being in such patients frequently occluded by swelling, The greater danger would be that the fluid in suddenly decending might enter the larynx. But both these accidents can be thoroughly guarded against by keeping the mouth open as widely as possible during the douching. Reflex action is thereby induced which raises the velum pendulum palati and thoroughly closes the naso-pharyngeal space, preventing breathing through the nose and affording a channel for the fluid to reach the other posterior nostril. In cases of children a long card, should be placed *endwise*, between the teeth, to prevent them from accidentally closing the mouth.—D'Ary.

During the atrophic stage of ozaena Gottstein's method of tamponating should be employed. It consists in introducing plugs of cotton into the meatus by means of a probe or bougie (round which they are wrapped), far enough to fill the whole meatus. This can be accomplished by a careful rotary motion. The tampons should be changed every day.*

In order to cure the mucous membrane various remedies are employed, according to the period and intensity of the disease. If it is in the hypertrophic or catarrhal stage with symptoms of irritation, indicated by unpleasant subjective sensations, redness of the nose, etc., the following powder, or a similar one, should be blown into the nose mornings and evenings:

℞.	Morphiæ acetatis	gr. i–ii.
	Talc. powdered	ʒiss–ii.

If the symytoms are less acute the following may be used:

℞.	Acidi. boracici subtilis	gr. x–xx
	Talc. powdered	ʒiss–ii.

or the following:

℞.	Argenti nitr	gr. i.
	Talc	℥i. Or
℞.	Tannin	gr. iij.–x
	Talc	ʒi.†

FOR SYPHILITIC OZAENA.

℞.	Calomel	℈ii.
	Pulv. sacchari	℥ss. M. Or
℞.	Hydrargyri oxyd. rubri	gr. xvi.
	Pulv. sacchari	℥ss. M.

A pinch of either of these powders to be snuffed up five or six times a day.

For circumscribed hypertrophy use the galvanic cautery, or the solid nitrate of silver. Repeat the applications when the crusts have come off.

During the atrophic stage of the catarrh all irritants and astringents are hurtful; if in spite of the douches and tampons the patient continues to complain of intolerable dryness it is well to paint the nares two or three times a day with a solution of bromide of potassium, grains five, in one ounce of glycerine.

If the ozaena occurs in a patient suffering from some dyscrasia, a cure cannot be expected unless the general health is improved.—Abbreviated from *Med. Obozr.*

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*The tampon could be made a useful vehicle for securing a *continuous* action of remedies on the diseased mucous membrane.—D'ARY.

†I have found the following powder to act exceedingly well in acute catarrhal rhinitis, influenza, etc.:

℞.	Morphiae hydrochloratis	gr. ii.
	Pulv. acaciae	ʒii.
	Bismuthi subnitr	ʒvi.

M. Sig. Snuff up one quarter of this powder in the course of twenty-four hours.

This snuff almost immediately relieves the tendency to sneeze and other symptoms of irritation. I owe the receipt to Dr. Ferrier, of King's College, London, England.—D'ARY.

BOOK REVIEWS.

STUDENTS' GUIDE TO DISEASES OF THE EYE. By Edward Nettleship, F. R. C. S., Ophthalmic Surgeon to Saint Thomas' Hospital, and to the Hospital for Sick Children, Great Ormond Street. Second American from the Second Revised and Enlarged English Edition. With a chapter on Examination for Color Perception, by William Thomson, M. D., Professor of Ophthalmology in the Jefferson Medical College. Philadelphia: Henry C. Lea's Son's & Co., 1883.

It is unnecessary for us to enter into any details concerning the merits of this standard work. It has achieved popularity in this country as well as in England, and in recommending it to the student we do so with the full assurance, that he can buy no *better* book, within the limits of the author's intention. It does not profess to embrace the whole subject of ophthalmology, in the sense of the specialist. Like the majority of English works, it is strictly conservative, perhaps a year or two behind the outposts of the science, but it is amply sufficient for the student. Whilst it does not embrace all the novelties of ophthalmology, it presents nothing obsolete, nothing that has outlived its usefulness, and its directions may be followed with entire confidence. Though modestly offered to the student only, it is a work that may serve as a sufficient guide to the most conscientious and painstaking general practitioner. A feature of especial value to the student is the chapter on optics as applied to ophthalmology, and also the numerous references to preceding paragraphs, which in the proper places are found throughout the book, and will materially refresh the student's memory. It is a neat and handy little work, written in plain and clear language.

SELECTED ABSTRACTS.

IODOFORM IN OPERATIVE SURGERY.

BY. A. F. M'GILL, F. R. C. S.

The use of iodoform in operative surgery is comparatively recent, and at present is by no means general, as many surgeons are deterred from using it by the supposed risks of iodoform poisoning. Several deaths have been reported from this cause, and toxic symptoms have been by no means unfrequent, but when we learn that surgeons have been in the habit of packing from eighty to three hundred grammes of iodoform into newly made wounds, this is perhaps not to be wondered at. After six months' experience of its use, I have come to the conclusion that its dangers have been much exaggerated, and that when properly used it is a most valuable agent.

Iodoform may be applied with advantage in four different classes of cases: (1) In old septic wounds, the result of inflammation or of traumatism; (2) in recent wounds, in the infliction of which it is impossible for the surgeon to adopt full antiseptic precautions; (3) in wounds near any of the natural orifices of the body; and (4) as an external application combined with other antiseptic dressings.

(1) It has always been a matter of extreme difficulty to render putrid wounds antiseptic; in some cases, as, for example, in large abscess cavities, it is well nigh impossible; when, however, the wound is of comparatively small size, iodoform may be used with great advantage. Owing to its great insolubility, its antiseptic action continues for a long time, and thus is very efficacious in destroying organisms. The following case is so remarkable that it seems worth recording:—

A child, aged five years, was brought to see me at the Leeds Public Dispensary on December 6th, last year. The mother stated that the child had been ill for five weeks, that the left leg had been much swollen till a fortnight before, when it burst, and discharged a large quantity of matter. On examination the leg and lower part of the thigh were seen to be much enlarged, and a red blush extended from the foot to above the knee; there was an opening which would admit the finger-tip on the outer aspect of the leg at the junction of the middle and lower thirds, which was discharging unhealthy-looking fetid pus. On passing a probe, dead bone was detected. A pair of small sequestrum forceps were passed through the wound, and a sequestrum, which involved the whole shaft of the fibula for about an inch, was removed in fragments. The wound was then filled with iodoform, and dressed with a large pad of salicylic silk. This dressing was not removed for a week. The wound was then almost closed, the redness and œdema had entirely disappeared; the dressing was renewed as before. In another week the wound was perfectly healed, and the child practically well.

(2) In private practice, and more especially in country practice, it often happens that it is impossible to adopt antiseptics in their entirety, and the spray is often of necessity omitted. Under these circumstances it is important to use an antiseptic whose action is prolonged for a considerable time. It is in this class of cases that poisoning caused by the absorption of iodoform is most to be feared; the drug must therefore be employed sparingly, and rubbed with the finger over the whole of the raw surface; indeed it is unnecessary to use a large quantity, as a small amount seems to answer every purpose. I have not as yet seen any evil arise from its use when applied in this manner. It might be supposed that healing by the first intention would

be prevented, but this is not the case, as I have seen many cases treated in this way heal immediately in whole or in part. The treatment of small abscesses, whether connected with enlarged lymphatic glands or simple in their origin, is much facilitated by an iodoform dressing. The abscess having been opened its cavity is filled with the powder and a salicylic silk dressing applied; this need not be disturbed for a week, when it can be renewed if necessary. The advantages of this method of treatment in out-patient hospital practice are obvious; the results obtained are excellent.

(3) Ordinary antiseptic dressings are, as is well known, inapplicable in operations near any of the natural orifices of the body, and also in the operation of colotomy and others of a like nature. In these cases iodoform may be used either in powder or mixed with glycerine in the proportion of one part to eight. In a patient on whom I recently opened the colon in the left lumbar region this use of the drug was found of great service. In another case, after tying a large mass of hemorrhoids, I found that separation was delayed beyond the usual time; but the putridity which usually occurs under these circumstances was entirely prevented by painting with the mixture of iodoform and glycerine mentioned above.

(4) Iodoform may be used as an adjunct to other antiseptic dressings in two ways—either to purify the skin, or to increase the antiseptic power of the dressing employed. The importance of having the skin surgically clean cannot be too strongly insisted upon, the presence of organisms on the skin being one of the most frequent sources of wound infection. This has been particularly insisted on by Dr. Ogston, who has shown that micrococci are found in great numbers in the ducts of the sweat-glands, and that dangerous consequences may supervene owing to micrococcus infection. With the object of reducing this risk to a minimum I have lately used a thin iodoform ointment or pomade, using it as an inunction to all parts in the neighbourhood of the wound. By adding tragacanth powder to glycerine, in the proportion of twenty or thirty grains to the ounce, a convenient basis is obtained, to which iodoform can be added in any desired proportion; a drachm to the ounce seems to answer every purpose. With the object of increasing the power of the dressing employed, iodoform may be used freely external to the wound. The dressing is applied in the following manner:—The operation having been completed with the usual antiseptic precautions, a strip of gauze is dipped in carbolised water and sprinkled thickly with iodoform; this is applied to the edge of the wound over the sutures. A handful of salicylic silk is then taken, and about a teaspoonful of iodoform is poured upon it; this is placed over the end of the drainage-tube. If it is probable that the discharge will be large in amount, the skin is powdered with iodoform. A pepper-box may be conveniently

used for this purpose, and silk freely used wherever it is expected that discharge will collect. A pad made of silk placed between gauze, and large enough to overlap the wound for eighteen inches in every direction, is then fixed to the part with gauze bandages ; the edges are secured with elastic webbing or with strapping. A first dressing applied in this manner need not usually be disturbed for from five to eight days, and subsequent dressings may be left even longer. This mode of treating wounds is in practice found to answer admirably, and this is what we would expect on theoretic grounds, for it fulfills two conditions of primary importance ; it keeps the wound and its discharges aseptic and enables it to be kept at rest. An enlarged experience may possibly make me change my opinion as to the value of iodoform ; at present I consider it a perfectly safe and reliable antiseptic.—*Lancet.*

ACETONÆMIA.

In the death by coma, which is one of the modes by which diabetes terminates, there are many cases in which no lesion is discoverable. An acute coma is produced in such cases by the sudden development of acetone in the blood—hence the term *Acetonaemia.* It can be detected free in the urine in cases of diabetes, but it appears to exist in the blood in the form of aceto-acetic acid, which readily yields acetone. The circumstances under which this conversion of aceto-acetic acid into acetone takes place in cases of diabetes is not well understood. Aceto-acetic acid is a product of the alcoholic fermentation of the glucose, and, hence, the acid condition of the blood in diabetes is explained.

According to Dr. Ralfe, there is a striking similarity in the symtomatic expression and in the morbid changes between acetonæmia, acute yellow atrophy, and acute phosphorous poisoning. If a sudden accumulation of acetone takes place in the blood, either because of its excessive production or because its excretion is prevented, delirium, convulsive movements ending in profound coma come on, and the changes found post-mortem consist in acute fatty degeneration of the liver and other organs.

Opposed to this view of the constant presence of post-mortem changes, which ally acetonæmia to acute yellow atrophy and phosphorous poisoning, are the statistics of the deaths from diabetes, collected from the records of the London Hospital for eight years. Dr. Stephen Mackenzie, who has submitted these figures, gives the number of deaths from coma as nineteen, out of thirty-seven deaths in all, of which there were seven that presented no post-mortem evidences of disease. Erroneous or imperfect observation must be suspected here, since Dr. Mackenzie admits that in one of eleven cases there was fatty degeneration of the liver found, and in the others of this group there was atrophy of the liver cells. These eleven cases constituted one-third of the whole number of fatal cases examined after death.

Acute diabetic coma is not always due to acetonæmia. To the sudden production of fat embolisms has been ascribed the comatose state in some instances. So far as Dr. Mackenzie's observations are concerned, however, fat embolisms, as a cause of coma, must be regarded as doubtful. Another lesion which may have some relation to the sudden production of coma, is a degenerative atrophy of the heart, noted by Mackenzie in some cases. This observation has also been made by Schmitz, who finds that an atrophic change takes place in the muscles of the body generally, including the heart, and to this he refers some of the cases of sudden death ascribed to acetonæmia.

It may be desirable to state that the most easily applied test for acetone is ferric chloride. To the urine suspected to contain acetone, solution of the chloride of iron is added, drop by drop, when a deep reddish-brown color is produced, if the acetone be present. A more complicated reaction is the formation of iodoform (iodide of formyl), when acetone is present, by the action of iodine. This test is based on the usual process for obtaining iodoform, by the reaction between iodine and alcohol producing iodoform.—*Medical News.*

ON THE TREATMENT OF CANCER OF THE RECTUM.

Mr. A. E. Barker (*Lancet*, February 24, March 3, 1883) points out the different indications for treatment of cancer of the rectum as illustrated by a group of eight cases, in five of which he chose colotomy, in one excision, and in two no surgical interference.

The disease in seven out of the eight cases appeared, after careful manual examination and from the clinical history, to be the usual form of cancer met with in the rectum, which the author thinks is better described by the name of columnar epithelioma than adenoid. In one instance where excision was performed, the structure was proved by the microscope. In another the growth may have been encephaloid. In all but one the growth was seated fully three inches from the anus when first examined, and involved the whole circumference of the bowel; in one (in a male) it was limited to the postero-lateral aspect of the gut; in all the anus was free, and in none was there any glandular involvement or secondary deposit. In seven the family history was against heredity.

Blood in the motions was in four cases the first thing noticed, and was present, sooner or later, in all. Difficulty in defecation or diarrhœa was the next marked symptom, and after this bearing-down pain. Three of the patients suffered comparatively little from continuous pain, only complaining of a little during motions. Pain down the thighs was marked in two cases. In the more advanced cases diarrhœa (twenty passages daily) was a prominent feature.

The clinical factors upon which the authors decided for or against operation were as follows: In Case I the growth had opened up the vagnia, and the resulting incontinence of fæces of the most revolting kind, together with the distress from the passage of the motions over the ulcerated surface of the cancer, fully justified the hope that an artificial anus in the loin would give relief. In Case II excision was justified by the malignacy of the growth, the suffering caused at each motion, and by its limitation and accessibility. In Cases III and IV the growth was very chronic and bulky, and was causing obstruction alternating with profuse diarrhœa. Ulceration and perforation of the bowel above the stricture were, therefore, to be feared if a free exit for the motions was not immediately provided. In cases V and VI the operation was almost entirely on account of severe pain, with diarrhœa, other troubles being less prominent. Morphine produced constipation, and in this way rather aggravated than relieved the trouble, Finally, it was hoped that relief of the new growths from the irritation of defacation might retard their progress. In Case VII the condition was not one that called for any active interference; and in Case VIII, also, there was but little distress as yet, and, as the patient could command the best advice and any diet, the fæces could be kept in a condition to pass readily through the contracted bowel, so that the patient, though seventy-seven years old, enjoyed very good health.

In five cases colotomy in the left flank was performed by Amussat's incision, in one excision. The wounds were in every instance guarded against septic contamination during the operation by frequent sponging with carbolic solution, especially after opening the gut. The subsequent dressing consisted of carbolic oil on lint, covered with a pad of salicylated wool. All the colotomy wounds healed rapidly, almost completely by first intention, except in one case, where, as the healing was rather too rapid, some of the fresh union was broken down to allow a little wider opening to the gut. Inflation of the bowel from the rectum was practiced in all the cases of colotomy, and the finding of the bowel was much facilitated thereby. In one case the peritonæum was wounded, but without bad consequences, as the wound was kept aseptic. and the opening of the bowel deferred until the fifth day after the latter had been stitched by its muscular coat only to the skin.

Those cases did best in which the mucous membrane was most carefully sewn to the cut surface of the skin.—*New York Medical Journal.*

PROLONGED SUSPENSION OF VITALITY THROUGH THE SUBCUTANEOUS INJECTION OF MORPHIA AND ATROPINE.

Dr. Alexander, of the Liverpool Workhouse Hospital, reports the following:

The following case shows that a full dose of morphia and atropine may, under some conditions of the system, set up alarming symptoms of interference with the circulation and respiration. The hasty action of a nurse increased the dose much beyond the ordinary one, and the resulting coma was so profound that the patient was at one time almost abandoned to the death that seemed to have irrevocably seized her. Prolonged efforts to resuscitate her caused the pulse to be just felt, and the respiration to become automatic at the rate of four per minute, and for several hours this was all the progress. At the end of that time the awakening was instantaneous, and just as suddenly the pulse and respiration resumed their normal rate and vigor.

Margaret M., aged thirty-seven years, had the left ovary removed, under the spray, on March 20, 1882, on account of an enlargement of that organ that had been for a long time attended with acute pain. Previous to operation the pain had been relieved by morphia injected subcutaneously, and after operation these injections were directed to be repeated twice a day should extreme restlessness or abdominal pain call for them. On the 21st, the day after operation, she had nine minims of the hospital solution injected. As this only calmed her, and did not produce any soporific effect, and as on the 24th she had been excited and disturbed by the dressing of the wound, twelve minims were administered a little after 12 o'clock, mid-day. This represented three-fifths of a grain of morphia and one-fortieth of a grain of atropine. At 1 o'clock she became livid, breathless, pulseless, and insensible. A head nurse was summoned, who sent the ordinary nurse for a doctor, and, in ignorance of the previous injection, injected into the arm of the comatose patient five minims more of the morphia solution. The house-surgeon, when he came, injected ammonia, gave brandy enemata, used artificial respiration, and applied electricity, without effect; and when I happened to call at 4 o'clock to see how my patient was getting on, I found them straightening her out preparatory to putting her in her shroud. She was to all appearance dead, but a faint flicker over the cardiac region caused me to hope. The night was a windy one, and a current of fresh air was blowing along the corridor with considerable force. The patient's bed was removed into the fresh air, and artificial respiration, galvanism, frictions, and warmth were restored to with renewed vigor. Up to 5:30 P. M. only a spasmodic breath every quarter of an hour and a feeble beat of the heart every now and again encouraged us to proceed. At 6 o'clock the respirations had become automatic, but only at the rate of about four per minute; and the pulse was irregular and difficult to feel. I then left the patient under the charge of relays of nurses, who were to continue the artificial respirations and the frictions and who were to give her some strong coffee as soon as she could swallow. I returned at 7 o'clock. Just as I was entering the ward a nurse poured some coffee into my patient's mouth. She suddenly fell back as if dead, and both respiration and circulation again stopped. I immediately turned her over on her side, so that the head hung out of the bed, and, slapping her on the back, secured the discharge of the coffee from her mouth and windpipe. In half an hour the respiratory movements were performed spontaneously at the old rate of four or five in a minute, and the pulse was as feeble as before the coffee accident. At 9 o'clock the patient's state was much the same, except that she had become a little warmer and the pulse stronger and more regular. But shortly after 9 o'clock she opened her eyes and looked around her, astonished at the number of nurses round her bed, and at the strange place in which her bed was. Her pulse and respiration became at once natural, and at first one felt as if the patient had been humbugging, and that the sleep was only feigned. She declared she had been in heaven, so delicious had her sensations been, and was inclined to be angry with us for disturbing her sleep. During the next two hours she was rather restless; then she fell asleep, and slept comfortably all night. The operation was not interfered with in the least by the means used to resuscitate the patient. I have lately heard from her that she is quite well.—*Medical Times and Gazette.*

SEVERE HÆMORRHAGE AFTER TOOTH-EXTRACTION TREATED BY TRANSFUSION.

The *Revue Odontologique* for April contains an interesting account of a case of almost fatal hæmorrhage after tooth-extraction. The patient, a young soldier of twenty-two, with a marked history of hereditary and collateral hæmorrhagic diathesis, was admitted to the Hôtel Dieu, and had some molar roots removed without telling the house-surgeon any facts as to his history, and the operation which was performed was followed by profuse hæmorrhage of a dark color, without clots. Next morning plugging with lint and perchoride of iron was tried without permanent effect. On the third day actual cautery was tried at the bottom of the socket, followed by plugging with compressed sponge, the jaws being fixed by a bandage, and ergotine subcutaneously injected. On the fourth and fifth there was no hæmorrhage; injections continued. Next day (the sixth) the bandages, etc., were removed, owing to sloughing and suppuration of the gums, and from the raw surfaces profuse bleeding recurred, and no local measures were effective to arrest it. On the eleventh day the patient was moribund, and it was decided to try transfusion of blood. After plugging the socket again, one hundred grammes of blood were transfused into the cephalic vein, with immediate relief to the patient. In three hours the trouble began again and continued till next morning, when, after a second transfusion, the patient began to revive, although an access of syncope nearly proved fatal during the operation. However, the hæmorrhage was stopped, and in six weeks the patient was discharged cured.—*Lancet.*

ULCERATION OF THE OS UTERI.

Dr. George C. Pitzer, of Saint Louis, Missouri, contributes the following to the *American Medical Journal* of that city:

When we suspect that a woman is suffering from ulceration of the uterus, we propose an examination and forthwith make it, if permitted. We use one of Staufer's speculums, with hollow bulb conductor, stem and check wheel. These speculums are easily introduced, and when in place the vaginal portion of the uterus is well exposed and readily examined.

If we find an ulcerated os, we make the required local application through this same speculum, as follows: ℞ S. H. Kennedy's concentrated aqueous extract of pinus canadensis (dark), one teaspoonful; warm water, one tablespoonful. M. Saturate a wad of cotton batting with this solution, and while the speculum is in place, introduce the saturated cotton through it. That the medicated cotton may be placed firmly upon the ulcerated and inflamed os, we put the hollow bulb conductor into the speculum, and with this we push the cotton entirely through the speculum, and against the uterus. We now carefully withdraw the instrument, leaving the medicated cotton in place.

This application may be repeated daily, and after a few times the patient can introduce the speculum and apply the medicine without assistance. As improvement takes place the solution can be made weaker.

For making such examination and application, no speculums equal these. And for local treatment, in such cases, nothing equals S. H. Kennedy's Concentrated Aqueous Extract Pinus Canadensis. Richardson & Co., of this city, furnish in it either form required, dark or white.

It is astonishing how rapidly vaginal and uterine inflammation subside under this plan of treatment. Tender parts grow less sensitive, itchings and smartings are relieved, prolapsus disappears in many cases, leucorrheas are cured, and a general change for the better is enjoyed.

THE OLEATES IN SKIN DISEASES.

Shoemaker points out that the oleates must not be considered as mere solutions of the oxides in oleic acid. While the oleic solutions could not have therapeutically presented results different from those of the oxides employed in solution, the oleates themselves present a much different action by being in a chemically readily diffusible state. These salts, while possessing more efficacy at once, are of a stable character very different from the oleic solutions heretofore used, and, by containing less of the expensive oleic acid, are less costly. Wolff of Philadelphia has found the best and most ready mode for preparing oleates to be by the double decomposition of sodium oleates with solutions of neutral salts. The former is prepared by saponifying oleic acid with a solution of sodium hydrate. A solution thereof in eight parts of water is then precipitated by the salt required. This precipitate, washed and dried, yields the oleate.

Oleate of Mercury, used as a twenty-five to fifty per cent. ointment, made by mixing the oleate with lard, can be used as a cleanly and active substitute for unguentum hydrargyri in the inunction treatment of syphilis. When mixed with the ointment of the oleate of lead in proportions of one-sixth to one-third, it is very effective in chronic acne and eczema, especially in the fissured variety of the latter so common in the plantar and palmar surfaces.

Oleate of Zinc is a fine pearl-colored powder, with a soft, soapy feel very much like powdered French chalk. When dusted over a denuded surface it has a stimulating as well as an astringent action. It is *par excellence* the remedy for excessive sweating or in cases of hyperidrosis or osmidrosis. It has relieved and permanently cured some of the most distressing cases suffering from excessive secretion about the feet, in which the epidermis had macerated and peeled away, leaving a tender and exposed skin, and giving rise to a very disagreeable odor. It is most efficacious as a lady's toilet powder, particularly to those who are afflicted with shining faces in summer—seborrhoea oleosa. It is also useful in eczema vesiculosum and in intertrigo. It clings to the skin and does not dust off easily.

Oleate of Copper, has been very successful in curing rapidly cases of ringworm both of the head and the body, as an ointment made by mixing it with four to nine parts of vaseline or lard. After the head is washed and the hair cut short, a small piece of the ointment is to be lightly rubbed over the surface, and reapplied night and morning till all traces of the disease have disappeared. The parts should only be washed once in ten or twelve days.

Oleate of Bismuth can only be obtained by first preparing a crystallized bismuth nitrate, dissolving this in glycerine, and decomposing with this mixture the sodium oleate. It is of ointment consistence, and should be used as thus obtained. Pencilled over rosacea, particularly after the parts have been well depleted by punctures with a needle-knife, it acts well in intractable cases. When applied freely over the surface in cracked and sore nipples, it not only soothes, but arrests the dry and excoriated condition of the parts. The oleates so prepared and used possess superior advantages, in particular their deep penetration, their freedom from rancidity, their cleanliness of application, their great economy, only needing to be lightly smeared over the surface in small quantities, and their antiseptic action.—*American Practitioner*, January, 1883.

THE TREATMENT OF SYPHILIS.

More than forty years ago Dr. J. Marion Sims practiced in Alabama, near the Creek nation of Indians, where syphilis was then very prevalent, and their medicine men had the reputation of speedily curing it. Their remedies were decoctions of native herbs. One of the principal agents was queen's delight (*Stillingia sylvatica*). Dr. M'Dade obtained the formula from a colored man who had been using it very successfully. Instead of using the formula as he got it, he eliminated the inert substances, and the following is the formula he and his medical friends have been using for many years. "Fluid extract of *Smilax sarsaparilla*, fluid extract of *Stillingia sylvatica* (queen's delight), fluid extract of *Lappa minor* (burdock), fluid extract of *Phytolacca decandra* (poke root), āā℥ij., tincture of *Xanthoxylum carolinianum* (prickly ash) ℥j. Take a teaspoonful in water three times a day before meals, and gradually increase to table-spoonful doses." The *Stillingia sylvatica* and the *Smilax sarsaparilla* are supposed to be the efficient agents in M'Dade's compound fluid extract. Two severe cases of syphilis are given in detail, to show the powerful curative effects of this compound.—*British Medical Journal*, 10th March, 1883.

IS DISTILLED WATER IN ALL CASES THE BEST VEHICLE FOR EYE-LOTION.

Dr. Chapman (*Practitioner*) finds that distilled water itself is irritating when applied to the conjunctiva. Ordinary tap water is slightly alkaline and for this reason forms a better vehicle for all substances, with which none of its constituents are incompatible. Of course, it would not do as a vehicle for nitrate of silver; but for boracic acid the tap water is a better vehicle than distilled water.

NITRIC, NITROUS AND NITRO-COMPOUNDS IN ANGINA PECTORIS.

Dr. Hay (*Practitioner*) has made careful experiments with the following groups of nitrogen compounds in angina pectoris; (1) Ethereal nitrites, other than the nitrite of amyl; (2) Metallic nitrites; (3) Ethereal nitrates of the type of nitrate of nitrate of ethyl; (4) Ethereal nitrates of the type of nitro-glycerine; (5) Nitro-substitution compounds. He also tried compounds of amyl other than the nitrite. As representatives of these respective groups he used: (1) Nitrite of methyl and nitrite of ethyl; (2) Nitrite of sodium; (3) Nitrate of ethyl; (4) Pyroxylin; (5) Nitro-benzol and picric acid or trinitrophenol; (6) Chloride of amyl.

Those of the first group were found to arrest the anginal attack. A ten per cent. solution of the nitrite of methyl and a twenty-five per cent. solution of the nitrite of ethyl were used. There was considerable difficulty in obtaining a reliable solution of the latter. The solution of nitrite of ethyl was given in doses of from sixty to seventy minims; while the nitrite of methyl acted with equal effect in doses of twenty minims. The author concludes that the members of this group possess no advantages over the alkaline nitrites, and, certainly, as regards expense and stability, are greatly beneath them.

The sodium nitrite was found to act pleasantly and beneficially; its action being more prolonged than that of nitrite of amyl and nitro-glycerine. However, it must be borne in mind that many of the preparations of sodium nitrite contain not more than one third nitrite, the remainder being nitrate.

The members of groups three, four and five were without effect upon the paroxysms.

The chloride of amyl was beneficial, but not so markedly so as the nitrite. It would seem from this that the effect of nitrite of amyl in angina is due to both the amyl and the nitrous acid.

From this paper we conclude that the reliable remedies in angina pectoris are nitrite of amyl, nitro-glycerine and sodium nitrite.

SALICYLIC ACID AS A REMEDY FOR CORNS.

Dr. Traill Green, writing to the *Medical and Surgical Reporter*, speaks highly of the results obtained in the treatment of hard and soft corns with salicylic acid. He has adopted a formula recommended by M. Gezon, which is as follows:

℞.	Salicylic acid	30 parts.
	Extract. cannabis indica	5 parts.
	Collodion	240 parts.

Dr. Green says: "The collodion fixes the acid on the diseased part, and gives speedy relief by protecting it from friction. The cannabis indica acts as an anodyne, and the acid reduces and loosens the corn, so that it comes off in four or five days, adhering to the collodion. The remedy is applied with camel's-hair pencil, and if the corn is not well cured the application may be repeated. In four or five days the patient should use a warm footbath and rub off the collodion. If any portion of the corn remains, the acid should be applied again, and the treatment continued until the whole of the corn has disappeared. The skin will be soft and smooth as in the healthy state. The mixture dries immediately, and does not prevent for a moment the use of the stocking. I have used salicylic acid in the treatment of bunions with like good results. Collodion as found in the shops makes a good mixture but I have found a flexible collodion preferable, as it makes with the other ingredients of the remedy a denser fluid. The extract of cannabis should be the solid extract. I am sure no remedy has ever been proposed which is so useful in those painful affections of the feet as salicylic acid."—*The Pharmaceutical Journal*, 28th April 1883.

NITRITE OF AMYL AND NITRO-GLYCERINE IN URÆMIC ASTHMA.

The brief notes I give below illustrate the value of nitrite of amyl and nitro-glycerine in one of the sudden and distressing, though perhaps rare, phases of chronic Bright's disease, namely, uræmic asthma. Nitrite of amyl, acting probably through the vaso-motor nerves, relaxes the arterioles, and thus reduces blood-pressure. As it is very volatile, on the score of economy and convenience I always carry some of Martindale's capsules in my bag, and these are very handy for immediate use. Nitro-glycerine is said to have much the same action as nitrite of amyl, and, according to Dr. Mahomed, its great superiority over amyl lies in its gradual and more lasting effects, and the more convenient manner of prescribing it, and it can be taken regularly two or three times a day or oftner, one minim of a one per cent. alcoholic solution being the usual commencing dose. It is also made up in chocolate tablets, each containing one-hundredth part of a minim; but its action when given in this form is not so rapid as that of the alcoholic solution. M. P., aged fifty-five, retired from business 4th May, 1882. He had been ailing for about two weeks, but had been about. He had noticed swelling of his legs towards night for two months, and his face had swollen occasionally for the last month. He had always been careless of his health, and if he got wet—an event which happened not unfrequently—he would never change his clothes. He was taken suddenly ill in the evening whilst out walking, about a mile from home, and had to be taken home in a cab. On visiting him at 10 A. M. I found him sitting up in bed, gasping for breadth; countenance distressed, and of a sickly pallid hue; pulse feeble, temperature 98°; tongue pale and sodden; expectoration frothy, with some little blood intermixed; moist râles over whole chest, back and front; urine abundant, clear, containing one-fourth of albumen. At 2 P. M. I found his condition and posture unchanged; he could only speak a few words before he had to stop for breath. He inhaled three minims of nitrite of amyl (a capsule broken in handkerchief). Within a few minutes his breath was easier, and he was able to recline in bed, for the first time since the attack came on, before I left the house. I then put him on nitroglycerine, one-hundredth of a minim thrice a day.

May 5: He was lying easily in bed, breathing quietly, and expressing himself as feeling quite well; he said he was only waiting till I came before he got up. I cautioned him unavailingly that his life hung by a thread, and that he could only hope to continue it by the strictest obedience. On the 6th he still remained in the same improved condition. The next day he refused to take any more medicine, but promised to stay in the house, a promise which he did not keep. On the 16th he had another attack, and died quietly within thirty-six hours, the urine being loaded with albumen (A. Sheer, Cardiff).—*British Medical Journal*, 28th April, 1883.

APOMORPHIA: A SAFE, CERTAIN, AND QUICK EMETIC.

It has occurred to me, in several cases, to have patients who have been obnoxious to ordinary emetics. The emetic has caused nausea and depression, but no emesis. A few weeks ago, two cases of this kind occurred in my practice. One was a man who had been drinking and eating indigestible food. Domestic emetics had been given which had produced nausea and ineffectual attempts at vomiting. It occurred to me that apomorphia, used hypodermically, might succeed. I prepared a solution containing a grain of chloride of apomorphia, twenty minims of rectified spirit, and water to two drachms, of which I administered ten minims hypodermically, which equals one-twelfth of a grain. In seven minutes, it produced free and copious vomiting. There was no nausea, nor depression, nor intolerance of food. The other case was a man who was a total abstainer. Patient had loaded his stomach with a mass of indigestible food, which had caused acute pain in his stomach. He had tried domestic remedies without success. Pain was so severe, that I was called up at night. The other case having been so successful, I at once administered ten minims of the solution. In two minutes, without any previous nausea or warning, the contents of the stomach were violently ejected on the floor, the patient not having time to get a vessel to vomit into. This was repeated two or three times at short intervals, and the patient had speedy relief. In this case, there was no nausea or bad after-effect.

From inquiries which I have made, I am convinced that the value of apomorphia as a safe, certain, and quick emetic, is not appreciated, because not known. In cases of alcoholic and narcotic poisoning, it is a most valuable remedy, and, judging from my experience in one case, the emesis is delayed a few minutes only. In cases of acute gastralgia, and convulsions in children due to overloaded stomach, apomorphia will prove a speedy cure. I have given one-sixth of a grain of the drug to children by the mouth without producing any effect whatever. —Dr. Brown in *British Medical Journal.*

TREATMENT OF RENAL AND VESICAL CALCULI WITH LARGE DOSES OF ALKALIS.

At a meeting of the Harveian Society of London, May 3, 1883—

Dr. Broadbent read notes of two cases illustrating the solution of Vesical and Renal Calculi—one renal, the other vesical—which had yielded to treatment by large doses of alkaline salts. The first case was that of a man, aged fifty-five, who after an attack of renal colic developed characteristic symptoms of vesical calculus. He was ordered a mixture of an ounce of citrate of potash and half an ounce of acetate of potash, one drachm of these salts mixed to be taken three times a day, with a desertspoonful of succus taraxaci, in a quart bottle of salataris water, the latter being selected as the vehicle, as it was stated to be simply distilled water aerated with carbonic acid. After persevering with this plan of treatment for a month, with no interruption to his business pursuits, the patient passed a small calculus, which, though of course it was impossible to say how far it had been reduced in size, bore marks of erosion from the solvent action of the urine; immediate relief was afforded the patient from his symptoms, and he had remained perfectly well since. A remarkable feature about the case was that this patient as a rule took singularly little fluid either with or in the intervals between his meals; this, Dr. Broadbent remarked, suggested an observation as to one of the causes of calculus, whether renal or hepatic. Antecedent to the formation of stone in his kidney, the patient had twice suffered from gall-stones, five years and six months respectively before the attack of renal colic. Now there was no antecedent history of gout or calculous disease, the patient's habits were regular and moderate, his circumstances and mode of life were such as were conducive to health, and the only cause which could be traced, as likely to lead to the deposit of calculus, was his remarkable abstinence from liquids. Water was required in the system not merely as a vehicle for excretory matters, and to wash out the ducts, but also as a medium for the metamorphosis which was actively taking place everywhere, and an insufficient supply favored the formation of stone not only by concentration and inspissation of excretions and secretions, but by imperfectly carrying out chemical changes. The second case was that of a gentleman, fifty years of age, who was suffering from a renal calculus. The treatment adopted in this case was to give full doses of citrate of potash in the effervescing granular form, with a large quantity of water; and it was followed by the passage of a small rough calculus, which caused only slight uneasiness as it traversed the ureter, and no pain at all in the bladder or urethra; it would have been unnoticed if the patient, warned by the slight pain in the ureter, had not been on the look-out in accordance with instructions.—Mr. Grant doubted whether the eroded appearance of the calculus was due to the treatment; he thought it was more probably its natural state. The treatment was only applicable to very small calculi, and to those composed of uric acid or urates, which would be cured by a single application of the lithotrite.—Mr. Cripps Lawrence mentioned that calculi were sometimes developed in utero, and disappeared in early infancy under the influence of a similar treatment, the solvent in this case being the mother's milk. He had found that rickety children were specially liable to phosphatic calculi, which should be looked out for, and even dealt with by anticipation.—Dr. Renner and Dr. Hickman also spoke, and Dr. Broadbent, in reply, said that he only recommended this treatment where there was reason to think that the calculus was of small dimensions, and he would only add this caution to those who adopted the plan—namely, there was a risk that a patient being relieved by the treatment might think either that he had never had a stone in his bladder, or that he had got rid of it, and so might go on till the calculus had reached too great a size to be amenable to any treatment.—*Lancet.*

NOTES ON PARALDEHYDE.

As I have prescribed this new drug on several occasions, it may be of interest to give my experience. The dose as a hypnotic is from thirty to fifty minims. It produces sleep in most cases in a few minutes after taking it, the effect lasting from three to seven hours. Larger doses, no doubt, would produce longer narcosis. It produces no headache, no constipation, nor stomach derangement, contrary to the report given of it. In one case, it caused a slightly depressant effect on the heart. In a patient who had been accustomed to take chloral, it was stated that the sleep was refreshing, but, if disturbed during the sleep, the tendency to sleep left, which was not the case with chloral.

. Paraldehyde in some cases causes a peculiar burning taste in the mouth the following morning. The breath smells of the drugs for several hours after waking. It is probable that nearly all the drug is got rid of by the lungs in the same state as it is taken. Paraldehyde is not much, if anything, superior to chloral. It costs five shillings per ounce; chloral, sixpence per ounce; besides which, it requires a larger quantity of the former, so that it is about sixteen times as dear as chloral. Therefore it is not likely to come into general use. Being so insoluble in water, it makes rather a large draught, which is objectionable. —Dr. Brown in *British Medical Journal.*

THREE CASES OF LISTERIAN OPERATION FOR THE RADICAL CURE OF INGUINAL HERNIA.

In the following cases the antiseptic principle was strictly carried out.

Case I.—A European gentleman, aged forty-four, from Phillour, consulted me on December 7, 1882, on account of double inguinal hernia. The protrusion on the right side had existed since 1863, and that on the left since 1865. On December 11 I performed a modification of Professor K. McLeod's* (of the Calcutta Medical College) operation for the radical cure of the hernia on both sides. Commencing with a free exposure of the external abdominal ring, and of the hernial sac and spermatic cord for an inch or more below it, the sac was dissected clear of the cord and transfixed close to the ring with long thick double catgut ligatures, which were tied on each side. The sac was then cut across below the ligatures. The pillars of the ring were next brought together with the ends of the ligatures which held the stump of the sac. A Wood's needle was passed first through the outer end and then through the inner pillars of the ring, and threaded and withdrawn with the ends of the ligature on the outer side of the stump, and the same process was repeated on the inner side. The four ends, now holding the pillars of the ring, were tightly tied in pairs on each side of the stump of the sac, and the ring was thus effectually occluded without any undue pressure on the cord. The ligatures were cut short, and the external wound sutured with thin catgut. The patient left Lahore cured and not wearing any truss on January 13. Both wounds healed by the

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*Vide *Indian Medical Gazette* for October, 1881.

first intention, though the patient's recovery was delayed by a severe attack of dysentery, which developed itself on the day following the operation.

Case II.—A gentleman, aged forty-nine, from Amritsar, consulted me on December 30, 1882, on account of an inguinal hernia of the right side of six years' standing. The operation was performed on January 1st. The wound healed throughout without inflammation, and the patient got up on January 8. On the 14th he left for his home cured, and able to walk freely without a truss.

Case III.—A gentleman, aged thirty-seven, was sent to me from a distant station on January 3, 1883, with a tumour of the right testicle and right inguinal hernia. The hernia dated from July, 1872. The tumor was as large as the closed fist, of three months' growth, and of soft consistence. The operation was performed on January 5. The abdominal ring and tumor were fully exposed by a free incision. The hernial sac was found to be congenital, and contained a mass of omentum, which was adherent to the upper surface of the tumor. The neck of the sac and its contents were transfixed *en masse* with double catgut, which was tied on each side immediately outside the ring. The sac, omentum, and tumor were amputated half an inch below this point, and the ring, with the thick stump in the centre, was occluded in the same manner as in cases one and two. A horse-hair drain was employed and removed on the fourth day. On January 12 the wound, with the exception of a single stitch-hole at the top, was soundly healed. The patient left Lahore on January 20, 1883, well and not wearing a truss. (The tumor proved on examination to be a soft carcinoma. It weighed fourteen ounces and was confined to the epididymis. The spermatic duct was healthy.)

The operation I have adopted for the radical cure of hernia differs from that described by McLeod in the *Gazette* in detail, though the principal is the same. The modifications of McLeod's procedure, which I consider important, are briefly:

(1) Non-excision of the sac.

(2) Occlusion of the ring, with the ends of the catgut employed for its transfixion and deligation.

In this way the wound, in uncomplicated cases, is small, the catgut cannot slip off the sac, and the correct position of the stump in the centre of the ring is secured. I have recently operated in this manner on nine cases of hernia in hospital, in all of which he results were as good as in those reported. Under proper antiseptic management, without which the operation would be impossible, the wound heals at once, and consolidation of the ring is complete in from eight to ten days. —*Lancet.*

THREE PRESCRIPTIONS FOR HABITUAL CONSTIPATION.

BY J. MORTIMER GRANVILLE, M. D., M. R. C. P.

Some apology may appear necessary for these "prescriptions," more particularly as it is likely that some of my readers will think that I am scattering suggestions on subjects which do not, at first sight, seem to be at all closely related. I am, however, led to infer, from a very large and continuing influx of letters connected with the prescriptions for gout and rheumatism, that the hints thrown out are appreciated. Under these circumstances, I cannot hesitate to give the following formulæ for use in chronic or habitual constipation, than which few common maladies cause more trouble to the general practitioner, or are less readily relieved by treatment.

Still preserving what may be called the "nervous" standpoint, it is, I am convinced, indispensable to regard persistent inactivity of the bowels, when not demonstrably due to other causes, as the result of, either defect of peristaltic action ; deficient glandular secretion; or, interruption of the *habit* of periodic evacuation.

(1) When there is a lax and torpid condition of the muscular condition of the alimentary canal, we get food retained in the stomach or intestines until it ferments, or sometimes "decomposes," with the result of distension, pain mechanically induced, and either eructations or incarcerated flatus. I have recently seen a very considerable number of cases in which this last mentioned trouble had been so great, and at the same time so masked, as to have given rise to the impression that grave disease existed ; whereas every anomalous symptom has quickly disappeared as soon as the muscular tone has been restored, and the contents of the bowel have commenced to pass naturally on their course. The essential fault is partial, in some instances almost complete, loss of the reflex contractility of the muscular coat, so that the presence of ingesta at any part of the canal does not excite the intestine to contract and propel it onwards. It is worse than useless to employ ordinary aperients in such a condition as this ; they only irritate, without strengthening, the nerves on the healthy activity of which everything depends. When, therefore, this is the form of "constipation" which requires treatment, I give a prescription something like the following; and it is, in the majority of instances—of course nothing is uniformly—successful.

℞.	Sodæ valerianatis	gr. xxxvi.
	Tincturæ nucis vomicæ	♏ lx.
	Tincturæ capsici	♏ xlviii.
	Syrupi aurantii	℥iss.
	Aquæ ad	℥vj.

Misce, fiat mistura, cujus sumatur cochleare magnum ex aquâ ter die semihorâ ante cibum.

(2) The second form of constipation, in which there is a deficiency of glandular secretions, generally, throughout the intestine, manifested by a peculiarly dry and earthy character of the dejecta when the bowels *do* act, I treat by a mixture such as this:

℞. Aluminis	ʒiij.
Tincturæ quassiæ	℥j.
Infusi quassiæ	℥vij.

Misce, fiat mistura, cujus sumantur cochlearia duo magna ter quotidie, post cibum.

(3) The third form, which depends chiefly on interruption of the natural habit of periodic discharge, often results from repeated failure to move the bowels, in consequence of one or other of the two preceding forms of this trouble. This may generally be relieved by directing a perfectly regular attempt to go to stool, and by the use of the following draught, taken the first thing after *rising* from bed—not on awaking—in the morning, as nearly as possible at the same hour. It will be observed that it is not an aperient in the ordinary sense of the term. It is, as a rule, neither necessary nor desirable to continue it for longer than a fortnight. In most instances, it will be found to re-establish the normal habit in a week or less.

℞. Ammoniæ carbonatis	ʒi.
Tincturæ valerianæ	℥i.
Aquæ camphoræ	℥v.

Misce, fiat mistura; capiat partem sextam in modo dicto.

CO-EXISTENT DEFECTS OF URO-GENITARY ORGANS.

The concurrence of two or more congenital curiosities tends to call forth a more considerable amount of conjecture and speculation than the mere presence of a single extraordinary defect. The wisdom of this tendency of the human mind may certainly be called in question, because we should have thought that one incident might, or perhaps ought to, excite as much attention as a number of odd occurrences. At all events, the co-existence of absence of one kidney with defects in the organs of generation is a sufficiently noteworthy phenomenon, and Dr. Guttmann has recorded a male and female instance of this event in the April number of Virchow's *Archiv*. The first case was that of a boy aged fifteen years, who succumbed from Pott's disease of the spine. The right kidney and ureter were totally wanting, the left were much enlarged, and there was waxy degeneration of the glomeruli. The right vesicula seminalis was absent, as well as the right vas deferens; the corresponding tissues of the left side were of small size. Both testes were present and apparently natural, though, owing to a mistake, these were thrown away, and not properly examined after the autopsy. The second instance occurred in a female aged twenty, who died from phthisis. Again the right ureter and kidney were not present, the aorta was small, and there was no right renal artery. The external organs of generation were almost entirely undeveloped, the nymphæ and clitoris hardly recognizable, and the orifice of the vagina and that tube itself very narrow. A hymen was present. The small and long uterus were apparently kinked towards the right, at the junction of the body with the neck. The left broad ligament was normal, the right was inserted at the site of the kink, so that the whole right side of the body of the uterus lay free in the pelvic cavity. This circumstance and the apparent angularity of the uterus made it probable that a two-horned womb had to be dealt with, of which the right horn was scarcely at all developed. The right and left ovaries were small; the uterine half of the right Fallopian tube terminated in a blind extremity. There are now on record in literature about seventy instances of congenital absence of one kidney. Beumer collected altogether forty-eight; in twenty-two of these there was disease of the remaining kidney, enough to cause death; in twenty-six instances, on the contrary, the present kidney was healthy, although enlarged and heavier than normal.

By careful micrometric investigations the enlargement was shown to be due not only to an increase in size of the glomeruli and urinary tubules, but also to a hyperplasia of the renal tissue.—*Lancet.*

MISCELLANEOUS ITEMS.

Bromide of Ethyl for Spasmodic Cough.—Dr. Squire recommends a solution of one part of bromide of ethyl in two hundred parts of water, as a remedy for whooping cough and also in angina pectoris. This is of similar strength to the chloroform water of the British Pharmacopœia, and its dose is the same, namely, one-half to two ounces.—*New Remedies.*

Umbilical Cancer.—M. Depres reported to the Societe de Chirurgie, Paris, the removal of a cancerous tumor of the umbilicus from a man aged seventy-five. While dissecting it out he found that it penetrated the peritoneal cavity at the umbilical ring, and that it was necessary to open that cavity in order to completely extirpate it. He included a portion of the epiploon in the ring, and fixed it there by sutures, in order to faciliate union. The wound was dressed without antiseptic precautions, and union took place by first intention in almost the whole extent of the wound. M. Deprés is not an adherent to Listerism, and thinks that the peritoneal cavity may be safely operated upon without such antiseptic precautions.—*L'Union Med.*

THE

PHYSICIAN AND SURGEON

A MONTHLY MAGAZINE,

DEVOTED TO MEDICAL AND SURGICAL SCIENCE.

VOLUME V. JULY, 1883. NUMBER VII.

ORIGINAL ARTICLES.

REPORT OF TWO CASES.

BY L. M. HALL, M. D., SOUTH FRAMINGHAM, MASSACHUSETTS,
Physician to Woman's Reformatory Prison.

I.—CONGENITAL SYPHILIS,

Child, a male; born at full term July 8; weighed nine and one-fourth pounds.

The mother had complained a good deal of headache during her pregnancy, nevertheless she had been considered in fair health.

Of four previous births, but one child was living, this was the eldest of the four, the others having died in early infancy. During her labor two or three suspicious looking marks upon her person were exposed, but the woman absolutely denied ever having had syphilis.

Upon the second day after birth, the palms of the child's hands and the soles of his feets showed the peculiar glassy appearance so diagnostic of congenital syphilis. Upon the following day he screamed a great deal, often crying out with a sharp shrill cry, while he writhed and turned as though in great distress. The palms and soles at this time had become thickly covered with bullæ and soon an intensely red, confluent vesiculo-pustular eruption appeared upon the shoulders whence it rapidly spread until it covered nearly the whole body. The tongue, palate and throat were very sore. Hydrag. cum. creta, .06

gram, thrice daily was ordered; also ung. hydrag. .32 gram, once daily to be rubbed under binder.

July 12: Seemed in more distress immediately after nursing; soon mouth became so sore that nursing was impossible, when child was fed from a spoon with breast milk. Iodide of potassium in one gram doses, thrice daily, ordered for mother. No improvement following, the child was not allowed the breast, but was given cow's milk and lime water; the upper two-thirds of the milk being taken off and mixed, three parts milk to two parts lime water.

July 21: Improving rapidly; mouth better; hands and feet free from eruption.

The hydrag. cum. creta was discontinued.

August 6: Diarrhœa with copious, green watery stool set in. Bismuth and opium in small doses ordered.

August 7: No improvement.

August 8: No better. Hydrag. cum. creta, cinchonia and opium ordered.

August 9: Better.

August 10: At 5 o'clock P. M., the child seemed dying. A hot mustard bath, and a little aromatic spirits of ammonia revived him somewhat, but at 9 P. M., he lay in an almost lifeless condition, with eyes fixed and dull; bones of skull seeming almost ready to fall apart, so widely were they separated and so deeply sunken were the depressions along the courses of the fontanelles and sutures; the pulse could not be found; respiration scarcely discernible; surface cold. At a little after midnight the pulse became perceptible, the respirations a little stronger and the child was able to swallow a few drops of stimulant, and toward morning to swallow thirty-two grams of breast milk, obtained from a healthy woman.

From this time the improvement was steady, the child gaining in weight and general vigor. The inunctions were continued up to the time of dismissal from the hospital, one month later.

II.—NECROSIS OF A PORTION OF THE HARD PALATE.

Annie St. Clair, aged twenty-three; single; intemperate and lewd; committed to Reformatory Prison in May, 1879.

A most thorough examination revealed not the slightest trace of previous disease, and the girl affirmed that she was, and always had been perfectly healthy. She was entered as "healthy" upon the prison records and up to December 1st made little or no complaint of ill-health. At this time she began to complain of sore throat and was admitted to the hospital. The cervical glands were found to be indurated and sensitive to pressure; the throat, which was much congested, presented general greenish-white patches of ulceration; pulse, 110; temperature, 99 1-5°; bowels, regular; menstruation, regular; patient anæmic and complaining of feeling "sick all over," Strong tinc. fer. mur. was applied to the throat and a gargle of chlorate of potash solution and glycerine ordered, also simple, nourishing diet, tonics and chalybeates.

December 20: She seemed much better and the throat had improved. Light duties were assigned her; she was still given milk and apetizing food, and the tonic treatment was continued. In spite of all this, her throat did not get entirely well and she grew thinner and paler each day.

February 25: She complained of sore mouth. Examination revealed in the roof of this cavity a dusky red, swollen and tender area, extending from the soft palate forward nearly to the alveolar process, and one and one-half centimeters in breadth. This soon sloughed, leaving portions of superior maxillary and palate bones lying black and bare above, and emitting a horribly offensive odor.

Applications of tinc. fer. mur. were made to the affected parts. Quinine, cod liver oil and syrup of iodide of iron were prescribed.

March 28: Masses of necrosed bone slightly movable; odor foul and penetrating.

April 1: Bone removed, leaving free openings into nasal cavity.

Aprilt 5: Odor from month still very offensive; anorexia almost absolute; health deteriorating rapidly; inguinal glands indurated; os uteri encircled by superficial erosions; free, frothy leucorrhœa, endocervicitis. Syrup of iodide of iron discontinued, and iodide of potassium in doses of from one to two grams, thrice daily ordered, also ung. hyd. to infra axillary and inguinal regions, friction to be kept up fifteen minutes at each application.

Rapid improvement followed this treatment.

The edges of the ulcer healed, thereby greatly increasing size of openings into the nasal cavities, rendering articulation very indistinct and allowing free passage of food and fluids upward through the openings.

About May 1, the patient acknowledged having had a general eruption about a year before the attack of sore throat above recorded, said she was drinking very hard, at the time, did not consult a physician and was not treated; that as it all seemed to pass off she thought nothing more about it.

As soon as the roof of the mouth became firmly healed a hard rubber plate was adjusted to it, after which the voice became natural and the difficulties attendant upon eating were entirely obviated.

The treatment was continued for three months, or until the expiration of the sentence, the patient doing active work in the hospital and steadily improving in health up to the time of her departure.

CANCER OF UTERUS WITH OVARIAN CYSTS.

BY A. G. MESIC, M. D., MOOREVILLE, MICHIGAN.

I was called in November 1881, to see Mrs. B., then in her 45th year: and found her suffering from what she termed hysteria. To use her own words. "It is hysteria, I know, but I can't help it." Pain was complained of in the region of the uterus, with a much excited condition of the nervous system. She refused to have vaginal examination made. Put her upon morphine with some chloral, under the use of which she received temporary relief. Using these and other medicines for temporary relief, constituted the treatment for some days, as she absolutely refused a digital examination.

Soon, however, I noticed that at different times the abdomen presented very different appearances. Sometimes she would present the appearance of one, perhaps in the seventh or eighth month of gestation, while at another time, perhaps the next day, the only perceptible enlargement would be found in the region of the right ovary, and this was not large. Then again the abdomen would be found large as before, etc. This varying condition lasted for weeks; but as the abdominal enlargement came and went, more prominence remained on the right side. With all of this varied condition of the abdomen, there was at no time any excessive evacuation of urine or feces: and this, together with the great amount of tympanitis, that existed during the most enlarged state of the abdomen, proves that a great amount of it was gaseous at that time. Chloroform used by inhalation would reduce the enlargement.

After a time I was permitted to make digital examination, and found the uterus retroverted; the fundus resting low down in the hollow of the sacrum; while the os was pressed up behind the symphysis. In January we noticed that on the left side there were evidences of cystic trouble. Also some nodular masses, of small size, could be felt by vaginal examination, at the left of the uterus; while that organ was so firmly bound down to the position in which we found it, that all efforts to replace, both manual and instrumental, were resisted.

An accumulation of fluid in the abdominal cavity now commenced to make its appearance, which gradually increased, although diuretics and hydrogogue cathartics were used. Also a hardened nodular mass made its way upward from the pelvic cavity.

To relieve the ascitic accumulation, or rather the pressure resulting from the accumulation, I proposed paricentesis, having told the friends that no hope of recovery existed; and treatment was only palliative.

Dr. Webb was called on the 11th of March, and agreed in regard to tapping, but seemed to think that the probabilaties were that I had made too grave a diagnosis and prognosis. For I had told the friends the case was one of cancer of uterus, etc.

The first operation was done, on the above date, (March 11th), by Dr. Webb and myself, and not less than three and a half gallons of fluid containing forty parts by volume of albumen, were drawn. Diuretics were used to prevent the rapid reaccumulation; but in less than three weeks, the operation had to be repeated with about the same result as before.

Professor Maclean saw the case with me, on the second of April, and confirmed my diagnosis.

Opiates were used to relieve pain; cathartics and diuretics having to be resorted to at times. The tappings, gradually, became more frequent until she had been tapped fifteen times with no less flow at any time than two gallons.

The hardened mass rising out of the pelvis extended until those nodular masses could be felt all over the abdomen, which, for the last two operations, caused us to change the site of operation, from the median to lateral.

Death took place August 18, (1882). Postmortem, August 19, conducted by Dr. Hosmer and myself. (Dr. H. had never seen the patient while living.) A monocyst of right ovary, size of goose egg, and a polycystic growth of left ovary in which five cysts were each as large as a hen's egg. One and one-half gallons of fluid were found in the abdominal cavity. The viscera were covered with scirrhus deposits varying in size, from that of a small pea to that of a large hen's egg. By the coalescing of these masses the walls of the stomach gained a thickness of more than one inch; and its capacity diminished to that of about four or five ounces. These deposits seemed to have made their appearance on the fundus of the uterus at first; and then gradually extended until no space of an inch square of surface in the abdominal cavity, either of uterus, intestines, stomach, liver, or spleen, was free from those deposits. The cancerous cachexia was not so great in appearance on the features, as in some cases.

During the last three days of her life she took hypodermically one drachm of morphine with very little effect. Emaciation was extreme.

EDITORIAL BRIEFS.

THE Department of Medicine and Surgery of the University of Michigan graduated a class of one-hundred and seventeen in June. This is the first class which has taken the full three years graded course and the value of the course was well illustrated in the improved scholarship of the class. Without any dispargement to preceeding class, we may say that the one just graduated surpassed in the average scholarship of its members. They were well grounded in the fundamental branches of medicine and they give promise of bringing honor to the profession.

THE Alumni of the Medical Department of Michigan University held its annual meeting June 27. About one hundred and fifty were present. The president not being present, Dr. Frothingham was called to the chair and gave a short address. The following officers were elected for the ensuing year: President, Benj. Strong, Reading, Michigan; first vice-president, E. O. Bennett, Wayne; second vice-president, J. S. Blanchard, Parma; third vice-president, Wright Chittock, Jackson; fourth vice-president, Harriet Harrington, Boston, Massachusetts; fifth vice-president, E. A. Christian, Pontiac; Secretary, V. C. Vaughan, Ann Arbor; Treasurer, C. George, Ann Arbor.

The classes of '79 and '80 had reunions, though of the first of these, but few were present.

THE following letter was received by the Secretary of the College of Medicine and Surgery of the University of Michigan, and it speaks for itself. We suppress the name and post-office address, but give the county and State. It is humiliating to know that the author of this letter can enter without question a large portion of the medical colleges of this country, and that he will probably follow the advice of the doctor who wants him to go to an Eastern college. He has, of course, been informed that he cannot enter the "Medicine Coledge" to which he appears to have applied:

CECIL Co M—D June 7 1883

MEDICINE COLEDGE MISHAGON—*gentlemen*—I entend to Place my Self in a Coledge this Coming Winter and the Reason Is that I entend Seling my Property Here an going South and Starting on a nother Branch of Buseniss I Put this Last Winter in With a phosion and Have Bin folowing Extracting teath for four years and Have Red about a year in the medicine Line and now Want to Put in the Winter in a Coledge and Want to know Ho to Prosead and How to Prepair my Silf For the Winter Sation there Is One of Ower Doctors Wants me to go to Philad but I Want to go to Florida after I get threw if there is Business Enough in me Please Send me Catalog of your Coledge also something to Instruct me of near my Expince So I Can Know How to Prosiad my age is 38 years and my Health is most of the time good) Please to Inform me of What time the Winter Sation Comences and When is the best time to Come to Learn the most and get the Best infirmatun I Want to go therly threw the Sergical departoment and to under stand thi anaty of the Human Family as there is a grate Deal to Learn and I Want a thorough Chance so give me all the Information you Can.

THE probabilities are that the cholera now raging in Egypt will reach America before winter. The National Board of Health has been rendered helpless by the refusal of congress to make any appropriation for its maintenance, and the one hundred thousand dollars, left at the disposal of President Arthur, has been turned over by him to the Marine hospital service, an organization whose existence certainly cannot be known through any good works it has done. The inspection of immigrants is but imperfectly done anywhere and in many places is not done at all. Our country is open to all the paupers of Europe and any diseases which they may bring with them. Those surrounded by the cordons in Egypt are escaping and flying in every direction, and who can blame them for so doing? Our commercial relations with Egypt are now quite extensive, and many articles now imported from that country have already greatly advanced in price. Without any adequate inspection at our sea ports, these articles will be brought over and sold. The price of Egyptian mats, articles whose value depends upon the amount of filth adhering to them, has already advanced twenty per cent. and this very advance will be likely to lead to their importation. Then again, the meteorlogical conditions are probably favorable for the spread of the disease. Last year several cases of sporadic cholera were reported in this country, and we only need to have the spark applied in order to have a full blaze. The sanitary condition of many of our cities, both large and small, on the coast and inland, will furnish a fertile soil for the growth of cholera. It seems to us that the danger from cholera is imminent. At least it is sufficiently great to point out to the national and to local authorities the need of improved sanitary conditions. There can be no question but cholera flourishes most in filthy places. In 1872 it appeared in Saint Louis and in a few days broke out at a little town, one-hundred and fifty miles west, a town noted for its accumulation of filth; while it did not prevail at any of the intermediate stations. Cholara has its birth in the filth which accumulates at the great religious gatherings in India. It is spread in all directions by the filthy pilgrims as they return homeward, and it takes root wherever it finds sufficient filth.

The present epidemic of cholera in Egypt probably dates back to the outbreak at Mecca in November, 1881. The pilgrims had been comparatively well until the day after the great sacrifice of sheep on Mount Ararat, when cholera broke out with great intensity and killed thousands, spreading in a few days to Medina and Jedda. At that time Surgeon General Murray predicted that the disease would find its way into Egypt and to Constantinople.

It is well known to epidemologists that seasons of marked ærial disturbances are most suitable to the spread of this disease. In the cyclone year of 1876–77, there were seventy-five thousand four hundred and fifty-nine deaths from cholera in four months in the three districts of Chittagony, Nowkolly and Backergunge.

It is also true that seasons marked by sudden changes in temperature are favorable to the disease. In 1867, there were between two and one-half and three millions of pilgrims gathered at Hurdwar. Their health had been good until the 12th of April, when a rain storm came up and the temperature rapidly fell. The cholera broke out and killed seventy-three thousand.

We hear it frequently said that the English authorities will prevent the spread of cholera from Egypt. England has had possession of India for a long time and it has not checked the disease in that country. On the contrary the spread of the disease formerly was at not more than thirty miles per day, now, thanks to English railroads, the cholera spreads through India at the rate of more than one hundred miles per day.

It behooves every city and village in the United States to put itself in the best possible sanitary condition. At any rate, it can do no harm to clean up once in a long time.

MEDICAL NEWS.

Arsenic in Diabetes.—Dr. Longeville (*Jour. de Ther.*) finds that Fowler's solution in progressively increased doses from ten to thirty drops per day diminishes largely both the amount of urine and the sugar in diabetes.

Potassium Iodide in Psoriasis.—Greve states that psoriasis is always curable with large doses of potassium iodide. He begins with a small dose and gradually increases to doses of from thirty to forty-five grains.—*Tid. f. p. Med.*

Sodium Salicylates in Typhoid Fever.—Bareygi (*Gazz. deyli. Ospitali*) treats all cases of typhoid fever accompanied by profused diarrhœa, with sodium salicylate, which, he finds, checks the discharges. Larger doses may be given in this disease than in acute rheumatism.

Cannabis Indica as a Cause of Insanity.—Dr. Davidson (*Journal of Mental Science*) states as the result of personal observation among the Mohammedans, that the use of cannabis indica is a frequent cause of insanity. It is eaten mixed with honey, nutmeg and butter, and it is mixed with tobacco and smoked.

Treatment of Infantile Paralysis.—Dr. Barlow (*British Medical Journal*) thinks that electricity is the chief agent to be relied on in this trouble. The earlier the treatment is begun, the better. Stimulate the muscle first with the constant, and later on, with the induced current. At the same time have the patient attempt to move the affected parts.

How to Make Permanganate of Potash Pills.—It is well known that Drs. Ringer and Murrell have recently highly recommended these pills in amenorrhœa. Mr. Martindale (*Pharmaceutical Journal*) gives the following formula for preparing these pills: vaseline, two parts; parafine wax, one part; melt; stir till cold, and add kaolin, three parts. This should be mixed well with the permanganate.

Dry Treatment of Otorrhœa.—Dr. Burnett (*American Journal of Medical Sciences*) holds that the syringe should be used in this disease only when absolutely necessary for the removal of accumulation, and then only by the physician. Warmth and moisture favor the fungoid growths. The home treatment should consist of drying the ear with a twisted pencil of absorbent cotton. The physician should blow into the ear dry powders. For this, Dr. B. recommends the following: Triturate equal parts (grain to the minim) of boracic acid and tincture of calendula officinalis; allow to evaporate, and rub one part of this with from one to two parts of pure boracic acid. The author holds that recovery takes place under this treatment in one-sixth the time required by the wet treatment.

CORRESPONDENCE.

THE SAINT LOUIS MEDICAL SOCIETY.

Hall of the Saint Louis Medical Society,
Polytechnic Building, Corner 7th and Chestnut Sts.
June 23, 1883.

Editor of The Physician and Surgeon: *Dear Sir*—Please insert the following in your journal:

On June 23, 1883, Dr. Atwood introduced the following which was adopted by the Saint Louis Medical Society, after some considerable discussion:

Whereas, At the recent session of the American Medical Association, a preamble and resolution were offered for the consideration of said Association, purporting to represent the sense of the Saint Louis Medical Society upon the propriety of preparing a new code of ethics, or altering and changing the existing code in accordance with the present relations of the profession, and

Whereas, In said preamble the assertion is made that, "the Code has accomplished all it was designed it should, but at present many of its features are obsolete and not adapted to our wants. The necessity of an early revision is very apparent, is loudly called for in all parts of our land, and cannot be repressed much longer. . . . The time has come when the loud and very soon universal call will have to be heeded;" and

WHEREAS, The Saint Louis Medical Society did not instruct, "That the Committee be authorized to prepare a code of ethics which in their view will meet the wishes of the profession, and submit the same to the meeting of 1884;" therefore,

Resolved, That the Saint Louis Medical Society distinctly repudiates the statements contained in said preamble and again expresses its fealty to the existing code of ethics as a time honored and most suitable fundamental law of the profession, and specially deprecates any action calculated to reflect upon its loyalty to those principles which have heretofore secured immunity from the machinations of schismatics within or enemies without.

A. H. OHMANN-DUMESNIL, M. D.,
Recording Secretary.

THE MICHIGAN STATE BOARD OF HEALTH.

Reported for THE PHYSICIAN AND SURGEON.

The regular quarterly meeting of the Michigan State Board of Health was held in the Board's office at Lansing, July 10, 1883, the following members being present: John Avery, M. D., of Greenville, president; Henry F. Lyster, M. D., of Detroit; Arthur Hazlewood, M. D., of Grand Rapids; V. C. Vaughan, M. D., of Ann Arbor; and Henry B. Baker, M. D., Secretary.

Dr. Avery presented a communication from Ephraim Follet, of Sheridan, Montcalm county, relating to the overflow of lands caused by obstructing a stream for the purpose of running logs. He also read his reply to the letter, in which he stated the legal remedy and the difficulty in securing the abatement of such nuisances.

The secretary read his report of work during the last quarter, which showed that a successful sanitary convention had been carried on at Reed City, and arrangements had been made for a convention at Muskegon, August 23 and 24; that considerable correspondence had been had concerning the examination of plans for proposed buildings at various State Institutions; that the Report for 1882 had been distributed to various societies, libraries, etc.; that the weekly bulletin of health in Michigan had been regularly prepared and issued; that returns of the names and addresses of about one thousand and two hundred health officers had been received and filed; that a circular relative to the danger to be anticipated from smallpox, and one relative to the reporting of contagious diseases with appropriate blanks had been devised and distributed to all local boards of health; that the article entitled "Disease in Michigan in 1882" had been compiled; that the accumulated letters of the office for the years 1873–1881 had been arranged and bound: that the compilation of the articles on "Meteorology in Michigan in 1882," and on "Weekly Reports of Diseases in 1882" was well in hand; that circular 55, relative to the work of health officers had been revised to conform to the new legislation of 1883, and if approved by the Board was ready for publication.

The Secretary read a resumè of the recent work of other State Boards of Health.

The Board then proceeded to examine plans for proposed public buildings, under the law which requires all plans for State buildings to be submitted to the State Board of Charities, and to the State Board of Health. Plans were examined in detail as follows: for wings to the present School for the Blind at Lansing; for a proposed hospital at the Michigan Asylum for the Insane, at Kalamazoo; for a cottage hospital for the State Public School at Coldwater; and for a main building for the State Industrial School for Girls at Adrian, and made record of propositions which were approved, and several recommendations.

Dr. Avery reported a visit to Fremont, Newaygo county, to examine into a nuisance caused by an extensive tannery, where five hundred tons of hides are annually tanned. He had made recommendations which in his opinion would, abate the nuisance, and it had been promised that his recommendations should be complied with.

On motion of Dr. Lyster, the State Board's committee on Buildings, including ventilation, etc., was requested to prepare a report on the best plans and methods of construction of hospitals suitable for the various State Institutions.

TRANSLATIONS.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.

BY RALPH D'ARY M. D., ROMEO, MICHIGAN.

DEATH FROM TWO INSPIRATIONS OF CHLOROFORM.

BY C. Y. ISHAINSKY.

January 26, at 10:30 A. M., towards the close of a clinical lecture to the fourth course, the patient, a male, aged twenty-eight was brought in to be chloroformed in order to have a lupus on the lower lip cauterized. The patient entered the hospital in June, 1882, and previous to that time he had been treated for the same destructive disease during ten years. When he entered this hospital the wings of his nose, his upper lip and cheeks were covered with ulcers, nodes and scars. During six months he had been treated with iodide of potassium and of iron; the ulcers had been scraped with Volkman's curette, and cauterized with nitrate of silver. Finally the destructive process had been arrested, but not until it had destroyed the wings of the nose, a part of the upper lip, and the integument of the cheeks. Cicatrization had taken place everywhere except on the lower lip, where the destructive process still continued. In spite of the patient's prolonged residence in hospitals he was of strong constitution and had a sufficient amount of adipose tissue. When examined, he presented no contra indications for chloroforming. He willingly consented to be cauterized and asked if it were not possible to make him a new nose, for now he had only an opening left, large enough to admit the end of the little finger. .

The patient was placed horizontally on his back on the operating table, his head being slightly elevated. He was surrounded by about forty lady-students, of whom two watched his pulse, whilst we all observed his respiration. This was easily done, as we invariably uncover the chest of patients, when giving chloroform. We pour about half a dram of chloroform on an Esmarch's inhaler, holding the latter at some distance from the patient's face, so as to admit plenty of air to his lungs. Gradually the quantity of chloroform is increased, if there are no contraindications. Previous to this case, we had chloroformed *thousands* of patients, from one year to seventy years old, and in but very few had we met with dangerous symptoms, and then only in the second or third stage of anæsthesia. The usual measures of resuscitation had always proved sufficient.

In this case, my assistant, who was thoroughly competent, having chloroformed patients for me during thirteen years, approached the inhaler with half a dram of chloroform to the patient's face, in the usual manner. The patient made only two inspirations, when he suddenly became livid, the pulse disappeared, and breathing became difficult and superficial; in another moment it ceased altogether and the lower jaw dropped. The inhaler had been removed the moment that the first dangerous symptom manifested itself, and artificial respiration was begun at once, the tongue having been drawn forward and out of the mouth, where it remained hanging of itself. Artificial respiration was kept up for fifteen minutes; the windows were thrown open, the patient's hands and feet were chafed, cold water was being thrown on the pit of the stomach, spiritus ammoniæ was held under his nose, etc., but without result. Then I opened the trachea at one incision, cutting through the cricoid ring and the first two rings of the trachea. I introduced an elastic catheter and through it I kept blowing air into the lungs, whilst an assistant alternately compressed the thorax. In this way we performed artificial respiration rhythmically and regularly, at intervals of two to three seconds, for about twenty minutes longer, that is, until all hope of saving the patient left us.

On the 28th the autopsy was performed and nothing unusual was found in the internal organs, the heart alone excepted. In the pericardium was found about an ounce of serous fluid; the size of the heart was no larger than the dead man's fist. Its surface, especially its right half, was covered with a layer of fat. The walls of the left ventricle were of normal thickness without visible changes. The cavity was not dilated and the valves healthy and sufficient. The walls of the right ventricle to about one half their thickness, were composed of a layer of fat, and at the very apex the muscular tissue had disappeared altogether, its place being taken by fat. The cavity of the right ventricle on account of the thinning of its walls, was slightly enlarged. In both ventricles there was a little dark fluid blood. I ask: Is it possible, because of so slight a change of the right ventricle, to draw the conclusion that Nixitin's (the patient's) death was caused by paralysis of the heart from inhalation of chloroform?

During my three years' service as assistant I have opened and examined several hundred corpses, partly alone, partly in company with my late preceptor, Professor Illinsky. In patients who had died of paralysis of the heart we had always found the heart considerably enlarged and distended with blood. In our patient's case the heart was of normal size and the ventricles contained but a little fluid blood. The explanation, therefore, that death was caused by paralysis of the heart would be very far-fetched. I see no data on which to build such a conclusion. But, supposing that Nixitin really died from paralysis of the heart, this affection could not possibly have been produced by the small quantity of chloroform inhaled. It must have been owing to some other cause. Before, however, explaining the probable cause of Nixitin's death, I shall review the dangerous symptoms which may be followed by death during anæsthesia from chloroform.

In rare cases dangerous symptoms set in during the first period, the so-called period of volition; *most frequently* however, during the second period,—that of excitation and finally during the period of narcosis, but only rarely.

An inexperienced assistant may asphyxiate a patient in the beginning, by pouring some chloroform on a folded handkerchief and placing the latter close to the patient's mouth and nose, compelling him to breathe the pure chloroform. As chloroform does not sustain respiration, the patient will soon begin to resist. If nevertheless this manner of administering the gas is forcibly persisted in, asphyxia soon sets in, and death follows.

In the first stage respiration may be arrested also when the patient tries energetically to inhale the gas through the mouth, that is when he gets too large an amount at once. If continued, asphyxia and death will also follow.

Finally some patients from the beginning resist being chloroformed by holding their breath. If such a patient is forcibly held so as to have his nose close to the inhaler, he will soon stop breathing altogether, even after the chloroform is removed. If assistance is not given at once, he may die from apoplexy or from the pressure of the distended lungs on the heart (Weber), for the return of the venous blood is prevented while the mouth is held slightly closed and the diaphragm is strongly contracted.

In our case we had nothing of this kind, and our patient received an abundance of air with the chloroform. Gently and quietly, without any struggle, he breathed twice, and then death set in at once, without any signs of asphyxia.

Dangerous symptoms occur most frequently during the period of excitation (which was never reached by our patient). Patients who during this period scream or yell, throw themselves about, talk disconnectedly, or sing; also habitual tiplers should be chloroformed very carefully. Sometimes during their random talk they make a very long expiration, followed by a short inspiration; possibly they may once more expire very slowly but the inspiration does not follow, and they set their teeth, sometimes biting their tongue, and present very clearly the symptoms of asphyxia. If these symptoms are overlooked and energetic assistance is not given at once, we may lose our patient. The above dangerous symptoms may depend upon the circumstance that the muscles controlling the tongue and pharynx, being in a state of prolonged contraction, draw back the tongue and pharynx so far that the epiglottis closes the larynx and excludes the air. The remedy would be, of course, to draw the tongue forward. If this is not done, asphyxia must take place. If drawing the tongue forward is insufficient to re-establish natural respiration, the artificial respiration must at once be resorted to. Asphyxia may also be produced by accumulation of mucus or blood in the rima glottidis. These should be removed by means of little sponges.

We proceed now to notice the terrible spectacle of death during the period of toleration, or anæsthetic sleep. This takes place not only when the application of chloroform is prolonged unnecessarily but sometimes even long after the chloroform has been withheld. It occurs from sudden or gradual arrest of the action of the heart and lungs, without previous labored inspirations, without change in the color of the lips or setting of the jaws. The patient presents all the appearances of a corpse. The face is pallid, the muscles are relaxed, the nose, tongue and fingers are cold, the lower jaw is dropped and the pupils are dilated. These dangerous symptoms may be explained by the relaxing and soporific effect of the chloroform which produces as it were a muscular paralysis of all the muscles of the body, excepting those of the thorax and heart. In exceptionally unfavorable cases this paralysis extends also to the latter muscles, in consequence of which they cease to act, either gradually or suddenly. The majority of these cases we had been able to save, a minority died.

All these symptoms of the *third* period of chloroform narcosis we had the misfortune to witness at the *beginning* of the administration of the gas in the case of Nixitin. Scarce had he inhaled it when suddenly the lungs and heart ceased to act. There are many records of cases in which death has taken place during chloroform narcosis, and yet could not be ascribed to the chloroform. I class Nixitin's case with these. Had he died during the period of excitement or sleep, it might have been possible to ascribe his death to the chloroform, taking into consideration the fatty degeneration of his heart, limited though it was.

But the minute quantity of chloroform administered by competent hands and largely diluted with atmospheric air, cannot easily be recognized as the cause of his death.

As to the above described limited patch of fatty degenation, it could not have been diagnosed during life, there being also lately no symptoms; neither could it have been suspected in so young an individual.

Looking through the records of cases of deaths during chloroform administration there are some in which it took place from the intense excitement of the patient whilst on the operating table. Our case is exactly like the one recorded by Cazenave of Bordeaux. Cazenave wished to produce an amputation on a strongly excited subject without chloroform. In order, however, to deceive the patient he gave him an empty gas bag to smell at. The patient inhaled the pure air four times and died immediately. Kapeller cites two cases. The first was a patient on whom Simpson wished for the first time to observe the effect of chloroform during herniotomy. Everything was ready, when the assistant, whilst bringing the chloroform to the operating room, stumbled and spilt it all. There was no more chloroform at hand and the operation was begun without it. Scarcely had the first cutaneous incision been made when the patient drew himself together and died. The other case was a patient of the famous French surgeon Desault. Wishing to perform lithotomy, Desault marked with his finger nail the direction of the intended incision on the perineum. The patient called out and died. Our patient, N., although the operation had been proposed to him about an hour previously, was nevertheless nervous and excited in expectation of it. Whilst on his way to the operating hall, he happened to meet a servitor with the portable furnace full of glowing charcoal. This frightened him. Then the immediate preparations, such as removing his upper clothing, then being placed on the table, etc., still more excited his apprehensions, and he might have died as suddenly breathing simply pure air.—Abbreviated from *Med. Vestnik.*

The *Philadelphia Medical Times* records a case of death from the fear of anæsthesia. In order the better to examine a patient with fracture of the femur, the surgeons decided on anæsthesia. The patient, hearing this, refused to be anæsthized, asserting that he had heart disease. Nevertheless the surgeons were going to give him ether. This decision greatly excited the patient, and whilst the surgeons were still holding their consultation, and before a drop of ether had been given, he called for more air, and asked to have the windows thrown open, then he began to manifest the usual pre-lethal symptoms and died in a few minutes. A similar case has been related by Chief Surgeon Francis, in India. A drummer awoke suddenly, feeling something crawling over his bare feet; he thought it was a cobra and his comrades assured him that such must be the case. Then he imagined that he had been bitten by it and fell into a collapse, from which he died. When daylight came it revealed that the innocent cause of the poor fellow's death was a harmless lizard, which lay half dead beside the dead soldier.—From another number of *Med. Vestn.*

NEW TREATMENT OF CANCER.

Professor Nussbaum, after enumerating the unsuccessful attempts at preventing the development of cancerous tumors by ligating the main artery supplying the part, or by injecting various remedies into the parenchyma of the tumor, or around it, and after showing the frequency of recurrence after extirpation with the knife, proposes a new method of dealing with the disease. He had noticed, several years ago, that indolent ulcers of the leg rapidly improved when an incision was made around them, at about a fingers width from their margin, and down to the fascia, the incision being prevented from healing. Not long ago he treated a case of cancer of the mamma, with so strong a tendency to hemorrhage, that each dressing of the ulcer threatened her life. As the patient was nearly moribund from the frequent loss of blood, N. surrounded the tumor with a strong subscutaneous ligature, which he drew together with all his strength and then tied. The patient rallied completely. Not only was the hemorrhage arrested, but the tumor decreased to one quarter its size, and the ulcer began to cicatrize. The patient's strength rapidly increased. N. therefore now proposes completely to prevent the feeding of these tumors by their peripheral nutrient vessels. The blood which supplies the tumor through its base, whilst it does not absolutely starve it, is, however, sufficient to keep it stationary. In order to accomplish the desired interruption of the supply from the periphery, N. urges to form a furrow around the tumor, down to the fascia, about one centimeter wide, not with the knife, however, but with the thermocautery. In the above named case a tubercle had not been included in the ligature. Nine months after the application of the latter, this tubercle had grown and had thus reached the tumor of the mamma, which tumor had meanwhile become quite solid. The tumor now began to grow again and even to bleed. N., therefore, surrounded all the isolated tubercles with a deep furrow, and their growth evidently stopped. Six weeks later they were still shrinking. N. thinks that the thermocautery or the actual cautery is much more useful than is generally believed. The subjective condition of the patients, their strength and appetite, are much better after an operation with the cautery, than with the knife; the wound heals quicker, except in cases where approximation by sutures can be employed after knife operations; and relapses are much delayed. N. ascribes these advantages partly to the absence of loss of blood, and partly because the nerves and blood-vessels, being covered with cicatrix, are protected from the influence of the air.—*Münch. Med. Woch.*—*Vratsh.*

Translations from German Journals for THE PHYSICIAN AND SURGEON.
BY VICTOR C. VAUGHAN, M. D.

THE INFLUENCE OF CALOMEL ON FERMENTATION AND ON BACTERIA.

Dr. Wassiljeff (*Jeschner klin. Gaz.*) has studied experimentally, in Hoppe-Seyler's laboratory, the influence of calomel on fermentation and bacteria. He found that the presence of one part of calomel in from twenty to one hundred parts of fibrin or fat, did not interfere with the action of the unorganized ferments of the saliva, gastric juice, and pancreatic juice; but the calomel did prevent the formation of certain decomposition products, as indol, phenol, skatol, creosote and hydrogen sulphide. The calomel also prevented butyric acid fermentation. The action of calomel upon bacteria and micrococci was next studied, according to the Buchholtz-Wernick method. It was ascertained that the drug destroyed these organisms and prevented the appearance of new ones. From this it seems that calomel destroys organized ferments, but is without effect upon the unorganized ones.

So far, all the experiments had been outside the body. Now, experiments were made on three dogs. They were given one grain of calomel each, and after some hours were killed. The intestines were ligated in the upper part of the duodenum and in the lower part of the colon, and the entire contents were carefully examined. In no case could the putrefactive products, indol, skatol, hydrogen sulphide, etc., be detected.

It would seem from this that much of the good which calomel is known to accomplish in various intestinal troubles is due to its aseptic properties.

T

RESORCIN IN DIPHTHERIA.

Dr. Andeer (*Centralbl. f. Med. Wissenschaft*) has treated two hundred and twenty-two cases of diphtheria with resorcin without loosing a case. In the milder grades a single cauterization with the crystals or with a concentrated vaseline salve suffices. In more severe cases, the application is to be repeated, and in the malignant form, the drug is to be used both locally and systemically.

Further details are not given.

SYMPTOMS OF URÆMIC POISONING DUE TO RETENTION FROM A LONG AND NARROW PREPUCE.

Dr. Charles Hart (*Allg. Med. Central-Zeitung.*) states the case of a child, eight days of age, which suffered from uræmic symptoms, stupor, dilatation of the pupils, a small, thread-like pulse. There was retention of urine due to a narrow and close prepuce. Circumcision was performed and a band of adhesion between the glans and prepuce was cut. This relieved the retention, and the uræmic symptoms disappeared.

Dr. Hart thinks that this may be a more frequent trouble than we have supposed.

PHYSIOLOGICAL ACTION AND THERAPEUTICAL USES OF RESORCIN.

Dr. Cohn (*Archiv f. Kinderheilkunde.*) gives the results of some experiments on the physiological action of resorcin, and also estimates the value of the drug in some diseases of children.

In cold blood animals, resorcin is rapidly absorbed through the skin, and relatively small doses produce alarming symptoms and lead to death.

The subcutaneous injection of 0.008 gram killed frogs in twelve hours, and 0.5 gram in twenty minutes.

Warm blooded animals bear relatively larger doses of the drug.

The subscutaneous injection of a five per cent. solution of resorcin is not attended with local pain; but it decreases the number of beats of the heart and acts directly upon the muscles of that organ.

A one per cent. solution retards, but does not arrest fermentation. For this purpose more concentrated solutions would be required than could be used in medicine.

As an antipyretic, resorcin acts powerfully; but its effect soon passes off.

Dr. Cohn has made the following therapeutical uses of the drug:

(1) *In Stomatitis.*—Three cases; 0.3 gram of resorcin in from

one hundred to one hundred and twenty grams of water; results, most satisfactory.

(2) *In diarrhœa and Cholera Morbus.*—Thirty-five cases; thirty cured and five died. The drug acts quickly, and under its influence, the number of stools decreases and the vomiting ceases. The absorptive powers of the stomach and intestines are improved and the results are satisfactory. The dose is from 0.1 to 0.4 gram in 80.0 of water.

TREATMENT OF CHOLERA INFANTUM WITH KOUMISS (FROM MARE'S MILK).

Dr. Krassin (*Wratschebu Wyedon*) uses koumiss made from mare's milk as the only food in the infantile diarrhœas of summer. As a rule he uses koumiss one day old, and gives at first one teaspoonful every half hour. If this is well borne, it is given in quantities sufficient to satisfy the child's appetite. In some cases, he uses no medicine; in others, he give cotoin. As a rule the results are very satisfactory. The diarrhœa soon ceases, and the child gains in strength. The use of the koumiss is continued for fourteen days, after which the child can return to cow's milk.

IODOFORM IN DIPHTHERIA.

E. Sesemann (*Petersb. Med. Wochenschrift*) has used iodoform in the local treatment of diphtheria. He applies it mixed with three parts of sugar with a powder-blower. He considers it necessary that the powder should reach the posterior face of the soft palate and the mucous membrane of the nose. In order to be certain of this, a flexible tube is introduced through the nose and the powder thrown through this, or the iodoform is made into little rolls with vaseline and these, pushed back into the posterior nares, are allowed to dissolve.

Before the powder is applied with the blower, older children should cleanse the fauces by gargling a solution of borax, and the same solution should be thrown as a spray into the throats of younger children.

In severe cases the powder should be applied every hour or two. The accidental swallowing of the iodoform will do no harm. Of twenty-one severe cases thus treated, eighteen of the children being under six years of age, five died (23.8 per cent.)

Dr. Korach (*Wien. Med. Blätter*) has also used iodoform quite extensively in the treatment of diphtheria. He employs starch containing two per cent. of iodoform six times daily; or he applies a solution of iodoform in collodion or ether. Out of one hundred and twelve cases so treated, seventy-two being light, and forty severe, eight died.

A CASE OF MORBILLI-SCARLATINA.

Dr. Jsef Herzog (*Charite Annalen*) reports a case of measles complicated with scarlet fever, which occurred in a boy, eight years of age.

The child, when first taken sick, showed the slight catarrhal symptoms of the bronchi and conjunctivæ noticed in measles. On the morning of the fourth day, the eruption began to disappear, and the temperature was normal. During the evening of the same day, the temperature arose very high and a severe sore throat appeared. On the fifth day, an abundant scarlatinous eruption was observed. This complication is very seldom observed.

CHINOLIN IN DIPHTHERIA.

Dr. Otto Seifert (*Berlin. Klin. Wochenschrift*) pencils the throat with a five per cent. solution, and uses a gargle of a two per cent. solution of chinolin. In light cases the penciling is done twice a day; in severe ones, three or four times per day. The drug has a powerful antiseptic effect, and produces no unpleasant symptoms.

The milder cases of diphtheria speedily recover; the membrane separates within from twelve to twenty-four hours; the swelling of the glands disappears and after from twelve to twenty-four hours, the temperature becomes normal. In severe cases the most dangerous symptoms are mitigated.

The applications of chinolin relieve pain.

MEASLES COMPLICATED WITH ACUTE PEMPHIGUS.

Professor Henock (*Ber. Klin. Wochenscrift.*) reports the following: A four-year-old girl was sick with the measles. The eruption came on normally; but the fever did not abate. On the third day after the appearance of the eruption, the entire surface of the body was covered with blisters from the size of a hazel-nut to that of a dollar. The measles exanthem, which could be seen between these bullæ, were hemorrhagic.

The whole face was greatly bloated, and the eye-lids were so swollen that the eyes could not be opened. After the vessicular eruption ceased, the morning temperature fell to 37.8°, but the evening temperature rose to 38.5°.

The child was threatened with collapse, but revived. However, between the sixth and seventh days, croupous pneumonia set in, and, after eight days, terminated fatally.

Similar complications have been reported by Klüpfel and Steiner.

Henock pronounces this a complication of measles with acute pemphigus.

POISONING FROM EATING PLUM STONES.

Dr. Seferowitz (*Wien. Med. Blätter*) saw a case of hydrocyanic, or cyanogen, poisoning in a boy, twelve years of age, from eating the kernels of plum stones.

The symptoms were: convulsions, with loss of consciousness, which lasted for several hours, dilatation of the pupils, tetanuss and trismus, cyanosis and dyspnœa.

An emetic was given; the child was dipped into a warm bath and then treated with a cold shower; and artificial respiration was kept up. By these means, after twelve hours, consciousness returned. The patient was still very faint, and the pupils were dilated for many hours longer.

The boy stated that he had eaten a whole pocketful of plum stone kernels.

NAPHTHOL IN SKIN DISEASES.

Professor Kaposi (*Wien. Med. Wochenschrift*) gives his conclusions after having used naphthol in more than one thousand cases of skin disease. To the healthy skin fatty preparations containing as much as from fifteen to twenty per cent. of napthol, may be made without causing any irritation; while in certain diseased states a one per cent. preparation may produce marked irritation.

Alcoholic solutions of only from one-half to one per cent. irritate the healthy skin, and when frequently applied produce erythema urticatum.

Naphthol is absorbed through the skin and is excreted with the urine as potassium naphthol-sulphate. Therefore, in order to avoid constitutional effect, the applications must never at one time extend over the greater part of the surface.

It is important always to have the pure β naphthol. The following diseases have been treated with this drug:

(1) *Scabies.*—Without any preparatory treatment, a cure was effected by making a single application of naphthol salve, then powdering with starch and covering with a cloth. After twenty-four hours a cure is effected in all save the worst cases, in which a second application may be needed.

The salve used for this disease in adults consists of one hundred parts of fat, fifty of Dutch soap, fifteen of naphthol and ten of powdered chalk. In infants and young children only a five per cent. salve was used.

(2) *Eczema.*—The naphthol treatment is suitable for this disease, especially for primary eczema, only after the hyperæmic stage has passed. As even a one or one-half per cent. preparation of this salve causes irritation in this disease, it is better to use an alcoholic solution of from one-fourth to one-half per cent.

In eczema circumscripta chronica, it is well to wash the parts two or three times a day with a five per cent. naphthol soap. A one per cent. naphthol oil is used in eczema crustosum capillitii.

In eczema marginatum, the parts are pencilled from five to eight times daily with the following preparation: Alcohol, one hundred parts; glycerine five parts; naphthol, one part.

(3) *Prurigo.*—Naphthol is the most pleasant and most effective remedy yet tried in this disease. Every evening a five per cent. naphthol salve is applied to the parts (without bathing). In children the part is covered with a flannel during the night, and the flannel removed and the parts powdered the next morning. During the day the usual clothing is worn.

With children, however, it is pleasanter to give every second evening a lukewarm bath, in which a naphthol sulphur soap is used on the puriginous parts. This is allowed to remain a few hours, then the parts are washed with ordinary soap, dried and rubbed with a three per cent. naphthol salve. The latter is also applied on the evenings when the baths are not used.

In all chronic cases of prurigo, ichthyosis, etc., it is well to intermit one week for every three weeks use of the naphthol. In seborrhœa capilitii and the alopecia prematura depending thereon, it is first necessary to soften the sebaceous masses with naphthol oil, then cleanse the parts with the soap mixture, and finally apply for from five to seven days pencilings of naphthol alcohol of from one-fourth to one-half per cent.

Favorable results have also been obtained in acne vulg. and rosacea, sycosis, and lupus eryth. by respective applications of naphthol soap, naphthol-sulphur soap, and a paste made as follows: Naphthol, one part; spiritus saponis kali, twenty-five parts; spiritus vini gallici, fifty parts; balsam Peruv., two parts; lact. sulph., ten parts.

Very nice results have been obtained by Kaposi in hyperidrosis of the palms of the hands, soles of the feet and arm pits, by bathing the parts once or twice a day in the following solution: Alcohol, one hundred parts; naphthol, five parts; glycerine, ten parts. Then powder the parts with starch or with starch containing two per cent. of naphthol.

VOMITING FÆCES.

Professor Rosenstein (*Berliner klin. Wochenschrift*) reports the following very remarkable case: A nine-year-old boy, for five weeks, had been seized every now and then with peculiar convulsions accompanied by loss of consciousness. The convulsions would terminate with the passage of fecal masses from the mouth. In the intervals the boy would seem quite well. The pieces of fæces were usually from 1.7 to 3 centimeters long. In one instance, however, a piece 18 centimeters long was taken from the mouth. A clyster colored with alcanum was given and subsequently the fæces passed from both mouth and rectum was colored dark-blue. Generally the fecal vomiting occurred at the close of one of the convulsive attacks. Sometimes there would be a stool simultaneously with the vomiting.

Under the use of large doses of bromide of potash the attacks became less and less frequent.

Professor Rosenstein thinks that under the influence of a neurosis, resembling tetanus, there would be, during these seizures, a spasmodic stricture of the intestine, and from this stricture, there would pass down and up, through the walls of the alimentary canal, a peristaltic and an antiperistaltic wave.

APPEARANCE OF THE SPINAL CORD AFTER DEATH FROM CHOLERA INFANTUM.

Dr. Pick (*Prager. Med.*) examined the spinal cord of a ten months old infant, which had died of cholera infantum. He found, on making transverse sections of the cord in various places, numerous hemorrhagic spots. The medium and larger vessels were filled with blood corpuscles. The spots were distributed throughout the whole of the transverse section; but were more numerous in the posterior half and especially in the gray matter.

No paralysis had been observed during life. However, it is not impossible that this condition may exist in the cases of so-called vaso-motor paralysis.

EXPERIMENTS ON THE COMPARATIVE TOXICOLOGICAL EFFECTS ON GUINEA PIGS, OF CARBOLIC ACID, COMMON THYMOL AND CYMEN THYMOL RESORCIN.

Fubini & Giliberti (*Moleschott Untersuchungen*) have made experiments upon the comparative lethal effects of these four antiseptic agents. The animals experimented upon were kept fasting for twelve hours before the drugs were administered. The substances were dissolved in alcohol, and administered hypodermically. The absolute amount used was calculated per kilogram of the body weight of the animal. After the injection, the animal was placed under a glass globe and constantly observed.

From the experiments, it was ascertained that of the four substances tried, thymol was the least poisonous. The minimum lethal dose of this substance was one hundred and ten centigrams per kilogram of the body weight. The other substances were alike poisonous, the smallest lethal dose of each being seventy centigrams per kilogram of body weight.

TWO CASES OF ERYSIPELAS GANGRENOSUM FROM TATOOING.

Dr. Baumbach (*Deutsche Militarztliche Zeitschrift*) reports two interesting cases. The first patient presented himself July 5, the tatooing having been done June 29 His arm and fore-arm, especially about the elbow, were very red and greatly swollen. His temperature was 39.6 in the morning. In spite of its being kept supported and covered with ice-bags, the swelling of the arm increased, and on July 7 there appeared numerous small blisters. Four incisions, of from five to seven centimeters in length, were made through the highly hyperæmic, thickened and hardened skin of the arm and fore-arm. In the evening the incisions were enlarged and the muscular fasciæ were opened. On account of the great degree of suppuration these incisions were repeatedly opened, during the 9th and 10th of July. July 12, a piece of skin on the arm, five centimeters long and three broad, was black. A large amount of necrotic tissue sloughed away, and July 13 the suppuration extended into the axilla. The brachial artery and the flexus of veins now lay bare. The suppuration was profuse. After the deeper tissues had been reached, the suppuration and the swelling gradually subsided. After July 22 the temperature was normal, and the parts were healed by August 24.

The second patient (both were soldiers) was tatooed July 1, and on July 6, the inner face of the arm was covered with blisters filled with bloody serum. In the next few days, the gangrene rapidly extended. The inner face of the arm was wholly denuded of skin. From July 10, the parts seemed to improve, but there was still slight fever. On August 2, the axilla was found red and swollen; but by the close of November the parts had healed.

In both cases the rapid suppuration and separation of tissue continued for about one week. The pus came from the subfacial and intermuscular spaces from all sides. The fore-arm and especially the arm were masses of suppurating tissue. The muscles (the biceps, coracobrachialis and the flexors of the hand and fingers) also the large blood vessels of the arm lay bare as in an anatomical preparation. The muscles, being deprived of all the intermuscular substance, would fall apart when the arm was raised and looked like the muscles of an arm which had been dissected. The tissues were highly hyperæmic, and bled profusely on the slightest touch.

In both, the arm healed without any noticeable deformity, and in consequence of early active and passive movements and the use of warm baths, there was no stiffness or noticeable atrophy.

Thirty-one others were tatooed at the time these were, but none of the others suffered any ill effects. The tatooing was done as follows: A so-called China-Ink was moistened with saliva (of the operator?) and painted on the surface of the arm and fore-arm. Then the skin was picked all over by means of three common sewing needles which were fastened in a small piece of wood. Lastly the ink was rubbed in with the hand. The parts and also the needles were rubbed with lard.

The needles were examined, after these cases were presented for treatment, and eight days after the tatooing, but nothing harmful could be found by either microscopical or chemical examination.

TREATMENT OF DIPHTHERIA WITH A CONCENTRATED BORACIC SOLUTION.

Harries (*Allg. Med. Central-Zeit.*) considers boracic acid as a specific in diphtheria. Employed early in the disease, it prevents free exudation and destroys the membrane.

He uses the following:

℞. Acidi boracici	7	50
Glycerini		
Aquæ destillatæ āā	15	00

M. S. Paint on the parts, at first, hourly; later every two or three hours.

The treatment must be continued five days in order to prevent the reformation of the membrane. Swallowing the mixture is harmless, even when all of the above prescription was used in twenty-four hours.

[It will be seen by reading these translations that our German brethren have as many remedies for diphtheria as we have, and the probabilities are, that theirs, like ours, will all fail in severe cases.—TRANSLATOR].

SELECTED ABSTRACTS.

DISINFECTION BY CORROSIVE SUBLIMATE.

Dr. Tarnier, Surgeon to the Paris Maternite, has the greatest confidence in van Sweiten's liquid, employed as an obstetric antiseptic. The midwives and pupils all wash their hands in this liquid and the whole of the genital region of the patient is washed and injected with a solution of corrosive sublimate at a strength of two-thousandths. Prior to delivery the injection is renewed every three hours,and no accidents from its employment have ever occurred.

Dr. Tarnier proposes the disinfection of napkins and mattresses by the same means.—*Times and Gazette.*

A TRUSTWORTHY COMBINATION OF COCA, VIBURNUM AND CELERY WITH NOTES OF CASES.

William B. Hazard, M. D., writes in the *Medical Brief* concerning this preparation as follows:

Erythroxylon Coca is a shrub growing in several of the states of South America. The leaves are the parts of the plant used as a nervous stimulant or tonic. A large amount is collected annually by the natives and preserved for use by being dried in the sun. They are oval in shape, about two inches in length, and have a bitter and pungent taste when green; when dried, they taste like Chinese tea. The natives' method of use is by chewing the leaves mixed with a little ashes or lime.

The leaves contain coca-tannic acid, a variety of tannin which gives a green reaction with salts of iron; cocaina, a fixed, crystallizable alkaloid which benumbs the tongue and has a bitter taste; and hygrina, a volatile alkaloid, pale yellow in color, oily in consistence and possessing an alkaline reaction and a burning taste.

The physiological actions of coca upon animals are as follows: In small doses it dilates the pupils, causes hyperæsthesia and loss of co-ordination of movements. In medium doses, it lessens, and then abolishes sensibility. In large doses, it produces tetanic convulsions.

In man, all authorities agree that it prevents fatigue and enables the user to perform more labor with less exhaustion than would otherwise ensue. The natives of South America, at the time of the Spanish conquest, claimed for it a divine origin. This caused the conquerers to interdict its use; but these religious scruples gave way before the fact that the enslaved populace could perform much more labor with than without it—a strong testimonial to the benefits it confers upon its consumers. The results of experiments made in this country are that coca retards, in some way as yet unexplained, tissue metamorphosis, and consequently diminishes waste, while, at the same time, it stimulates the nervous system without subsequent ill effects.

The medicinal virtues of coca are faithfully outlined in its physiological action. It is indicated in all functional affections in which it is a desideratum to prevent waste of muscular or nervous tissue. In all such conditions this agent becomes a valuable aid to conservative medicine. More effective than tea or coffee, and devoid of the pernicious properties of alcohol or opium, it gives the patient a respite from suffering and gives the physician what he most needs; *time* in which to obtain the reparation of worn-out physiological units of the organism through the agency of improved nutrition.

In the treatment of the alcohol and opium habits, coca has proven itself simply invaluable. Nervous exhaustion, whether superinduced by too prolonged brain-work, business worry, or excesses in venery, finds in coca a valuable help toward a restoration to the normal condition. In convalescence from acute diseases, this again becomes a valuable aid by hindering excessive waste of the body and giving time for the digestive organs to supply new material for the restoration of the exhausted organism.

There is a large class of cases which require something more than a mere nervous stimulant, although the principal symptoms are those of nervous exhaustion. Reference is here made to those instances of disease, which in the female are accompanied with pelvic pain, and, in the male, with urethral and prostatic hyperæsthesia, and in both sexes with depression of spirits amounting to hypochondria reaching almost to melancholia. These cases require a sedative effect to be exerted especially over the reflex apparatus of the genito-spinal and abdominal sympathetic systems.

The varieties of *Viburnum* (*V. opulus* and *V. prunifolium*) have the power of reducing hyperæsthesia and reflex excitability—in these directions. Ovarian neuralgia, tending to abortion and dysmenorrhœa in the woman, and prostatorrhæa, psychical impotency and numberless symptoms of exaggerated irritability of the sensory nerves in the man, are happily relieved by preparations of *viburnum.*

Celery (*Apium graveolens*) has long been recognized as possessing strong powers as a diuretic, at the same time controlling irritability of the bladder, and exerting a most beneficial influence over headaches of nervous origin. As a soothing agent in sleeplessness originating in over-work, and as a stomachic tonic, when taken in moderate quantity after meal, aiding in digestion and assimilation, popular favor has long since marked it out as "a friend in need" to the nervous dyspeptic as well as to those whose appetite tempts to over-indulgence at the table. Celery, when taken in substance, or if the stalks are not properly blanched, often acts disadvantageously, especially if it is hastily swallowed without proper mastication. This may be avoided by the use of the fluid extract. The bane of American life is dyspepsia, which has gained recognition as *the* American disease. Good cooking and sufficient mastication of food would do much to overcome this national enemy. But we have to take things as we find them, and the average American has to have a stomachic stimulant or tonic furnished him to overcome the effects of a bad *cuisine* and worse habits as regards the pursuit of business as well as indigestion of food. In Richardson's "Celerina" we find a combination which very fairly meets the requisites hereinbefore pointed out. As a tonic and soothing agent, acting primarily upon the digestive and genito-urinary systems, and as a modifier of the nutrition of the nerves supplying the pelvis, it is, theoretically, well calculated to meet a large class of indications. Practically, it has proven itself worthy of a more extensive trial than it has yet had from the medical profession.

My own experience with "Celerina" has, thus far, been rather limited. In two cases of dysmenorrhœa, accompanied with ovarian hyperæsthesia, due to excessive child-bearing and over-work at the wash-tub, and consequent loss of appetite and emaciation, "Celerina" afforded marked relief. These were charity cases and, consequently, not very favorable subjects for treatment.

Under better circumstances, I am satisfied that permanent relief would have resulted.

A case of the most marked nervous exhaustion, consequent on prolonged masturbation, resulting in temporary impotency, was referred to me by a physician in Central Texas, in the summer of 1882. The patient was a very intelligent gentleman of thirty-two years of age; single; hypochondriacal, and low-spirited almost to the verge of suicide. Treatment by strychnia, phosphorus, laxatives and local applications to the neighborhood of the prostate gave him no relief. Cold baths and a general tonic regimen were equally without result. He was finally given two pounds of "Celerina," with directions to take two teaspoonfuls after each meal, which were faithfully carried out, and a cure was effected.

The first result to be achieved in the treatment of such a case, is to secure complete abstinence from the vile practice which was the primary cause of the trouble. This is often beyond the enfeebled powers of the patient, unless he has proper medical aid. I think the effect of viburnum, in this regard, by soothing the urethral mucous membrane and counteracting the "irritable weakness" of the genito-spinal center, may be safely relied upon in cases where there is any amount of will-power available. In a second case referred to me in October, 1882, by a physician of Southern Kansas, there was less marked hypochondria, due to indigestion, constipation, and lack of out-door exercise. Here a proper laxative, horseback exercise, and regulated diet produced some improvement, but the mental depression was not relieved until the second eight ounces of "Celerina" has been nearly exhausted.

In February of this year, and old gentleman from Southern Arkansas, the subject of attacks of melancholia recurring every two or three years, presented himself to me for treatment. His then present attack was marked by no definite delusion, but by such a profound depression of spirits that he could scarcely refrain from committing suicide whenever the surrounding circumstances would give him the opportunity to take his own life. Although a man of wealth, he feared impending poverty, at the same time recognizing the folly of such fears. Laxatives, cannabis indica, bimeconate of morphia, and a hydrotherapeutic course did him no good. He greatly improved on "Celerina," and at last accounts seemed fairly on the road towards recovery. His digestion and sleep were greatly improved by this preparation, and I consider it aided to make his condition more tolerable; at the same time I believe he would have recovered, as he had on three previous occasions, without much medication. It is possible, however, that he avoided commitment to an asylum by the use of the medicines prescribed, something terribly humiliating to a proud and sensitive spirit such as that possesed by this gentleman, as well as agonizing to his relatives and friends.

The excessive wear and tear of the muscular system during an attack of chorea and after rapidly recurring epileptic paroxysms, as well as during delirium tremens, would doubtless be diminished by the judicious use of the valuable agent.

I trust the profession may be induced to give this combination of excellent remedies a fair trial in properly selected cases. I know the honorable character of the manufacturer, and that reliance can be placed implicitly upon the purity and genuineness of the agents entering into its composition.

The protest of the profession has always been uttered against "secret nostrums" and "patent preparations," in neither of which category can this combination of well-known, recognized drugs in definite proportions, be classed.

THE TREATMENT OF POST-PARTUM HEMORRHAGE.

In an address opening a discussion at the Harveian Society, London, Dr. Percy Boulton, Physician to the Samaritan Free Hospital, made the following statements for the prevention and treatment of puerperal hemorrhage.

That a difference in the frequency of the second and third stages of labor exists, which accounts for the management of these cases in the practice of some practitioners. But there are undoubtedly certain *predisposing* causes, such as hemorrhagic diathesis, over-distension of the uterus from multiple pregnancy, excess of liquor annii, uterine tumors and exhaustion from various causes, which no man can avoid.

Firm uterine contraction depends on the nervous supply of the womb. If this has been exhausted by a long and tedious labor, that should have been terminated artificially hours if not days before, what wonder that post-partum hemorrhage to an alarming extent follows from uterine inertia?

It must, therefore, be evident that *prevention* of post-partum hemorrhage opens up all the methods of treatment adopted for terminating labor in a reasonable time, before the patient's strength is exhausted.

A relaxed uterus without hemorrhage might make it appear that contraction is not the *sine qua non*. In all such cases the uterine sinuses must have become first close by thrombus. In some anæmic patients this does not occur readily.

The measures to be adopted in the treatment are given in the order that would be followed according to the severity of the case.

The child being born, the patient should be rolled onto her back, the uterus being grasped and firmly held, and the placenta expressed in due time. Not being touched until it has passed the vulva, it should then be removed slowly, turning it over and over, so as to twist the membranes which follow into a cord, while the left hand grasps the uterus.

If the membranes do not follow easily, the cause should be sought. If the placenta and membranes are found to be entire, a dose of ergot should be administered by the mouth and the uterus supported for about one-half hour, after which the patient should be firmly bound. If from any cause the placenta be retained, or does not come away entire, the uterus must be emptied by the hand.

Should hemorrhage in the meantime supervene, pressure on the fundus will expel the clots, and friction and kneading of the uterus will excite and keep up uterine contraction. It will be well to inject hypodermically into the thigh or buttock twenty drops of liquid extract of ergot.

The patient's head head should be lowered, the room kept cool, and stimulants administered according to the pulse and state of exhaustion.

In mild cases these remedies will usually suffice. Should these fail or the case from the first be one of grave character, other treatment will be necessary.

Troublesome hemorrhage may result from laceration of the cervix uteri or the rupture of a vulvæ varix or from inversion of the uterus. The first two are rarely formidable, while the latter is readily diagnosed and controlled by replacement.

Unfortunately it is only a short step from a simple case of post-partum hemorrhage to one of the gravest that man can possible have to deal with. These are not cases that allow time to send for assistance, and division of responsibility, but have to be met and dealt with alone without a moment's hesitation. Beyond what has already been mentioned, what are our resources under such an emergency.

The uterus is empty, ergot by the mouth and hypodermically has been given, and in spite of pressure and kneading of the fundus, the organ relapses and serious hemorrhage continues.

Galvanism need scarcely be considered as a battery is rarely at hand, otherwise it is a most valuable remedy.

Cold, heat, the application of iodide of iron to the uterine lining and transfusion are the remedies which we have to select from.

The injection hypodermically of sulphuric ether, compression of the abdominal aorta, with bandaging of the extremities are supplementary measures.

Cold.—When ice is at hand it is usual to pass a piece into the vagina, and also to apply it to the hypogastric region, or inject ice cold water into the uterus, applying cloths wrung out in cold water or vinegar and water to the vulva.

Heat is preferable where the state of exhaustion is extreme. Water at 110° to 120° must be injected into the uterus up to the very fundus by means of a syphon syringe. Should these have failed, and life is undoubtedly at stake, add to the hot water one-quarter the bulk of liq. ferri perchlor. (not fortior) applied by means of the syringe already in use.

It is not an easy matter to pass the hand grasping a sponge full of fluid through the vagina without losing a great part of the solution. At a time when a man must be calm and have his wits thoroughly about him, it is important not to run any risk of failure, and I commend the syringe as the preferable method.

When enough of blood is lost that fatal syncope is imminent, the bulk of circulating fluid is sufficient to excite the heart to contract, but the blood-pressure within the cranium and oxygen-carrying fluid is so reduced that the central sources of nerve-energy cease to act.

From recent experiments we know that the heart continues to contract even when removed from the body, so long as the nerve ganglia in its substance are stimulated.

When the patient shows symptoms of impending death, auto-transfusion should be put into practice:—Lower the head by elevating the foot of the bed to an angle of 45°; bandage the extremities tightly; put a synapism over the heart. If the patient can still swallow, give a full dose of opium and brandy; if not, inject hypodermically twenty minims of sulphuric ether.

Now-transfuse.—Do not hesitate to operate so long as the heart is still beating and the lungs active. Use an instrument which any one can make for himself, composed of two glass cannulas, six inches of rubber tubing about one quarter of an inch in diameter and a pair of spring clips.

From *artery to artery* is far too difficult for anything but laboratory experimentation.

From *vein* to *vein* is by no means an easy operation as the veins are empty and hard to find. The apparatus should be put into a cup of salt and water 100° (one teaspoonful to the pint) to drive out all the air.

The vein of the donor should be opened, *after exposure by dissection*, a tape put around the arm to stop the flow till wanted, one cannula passed into and tied in the vein in the opposite direction to the venous current. A clip should be on the tube close to the other canular, to retain the saline solution. The recipient's arm must next be prepared, and an oblique opening made into it to insert the other cannula, first relaxing the tape of the giver's arm and the clip on the tube, so as to fill the apparatus entirely and exclude all air. The transfusion may be allowed to go on, the quantity of blood transfused being determined by the result.

In the absence of human blood a saline solution at 100° is certainly the safest substitute, as it is the easiest to obtain. Common salt used in the porportion of a teaspoonful to a pint of water at 100°. Hot water alone may be injected.

The same cannula attached to eighteen inches of tubing with a funnel at the other end. Care must be taken to exclude the air. The solution will pass into the vein by gravitation alone by raising the funnel, the current regulated by compression of the tubing.

Whether blood, or a saline mixture, or only hot water is used, it should be a maxim in midwifery that no woman should die of puerperal hemorrhage without being tranfused—*Medical Times and Gazette.*

AN UNUSUAL ACCIDENT IN CATHETERIZATION.

Dr. Allen (*American Journal of Obstetrics*) reports the following unique case:

On December 21, 1882, I was called by Dr. H. A. Bagley to see the following case.

The patient had been confined on the previous day about 9 P. M.; labor rapid and normal, the second stage being very short.

She passed no urine nor felt much desire to do so until the evening of the above date when the doctor in charge was sent for to relieve her. The catheter passed without difficulty, and about a pint and a half of urine was withdrawn, but on attempting to remove the instrument, this was found impossible, even when considerable force was used, sufficient to produce pain and occasion the patient to remonstrate.

Dr. Bagley seeing the case to be an unusual one, and thinking it would interest me, waited until my return, I being out when he sent for me.

About three hours later, I saw the patient and on examination found the instrument projecting one or one and a half inches from the vulvar orifice. On endeavoring to extract the catheter this was found to be impossible from some deep-seated attachment; I use the word attachment as this exactly expresses the sensation given by traction, this being as if the catheter was held by a short elastic band, and had not the sensation of general constriction of the entire instrument or of the portion at the vesical neck, which is by no means uncommon, being seen to a more or less extent in many cases, especialy in hysterical women.

A careful digital examination of urethra and bladder revealed nothing abnormal, the catheter having been passed through the urethra and the extremity being in the bladder. The catheter also was examined, as the thought occurred that the joint might have become loosened and a fold of mucous membrane caught between the two portions, but the continuity of the instrument was perfect.

Traction produced pain and a dragging sensation about the neck of the bladder. Upon suddenly letting go the instrument after traction had been applied it would snap back as if attached by a short elastic band.

Having considerded the case more carefully, we excluded spasmodic contraction of urethra and sphincter vesicæ by the peculiar sensation of attachment, not of constriction, and the further fact that it seemed impossible that so smooth an object as a silver catheter could be immovably held in the urethra when considerable force was used for a few moments, spasmodic contraction and retention being easily overcome by steady traction for a few seconds. The catching of the mucous membrane between the two portions of the instrument having been previously excluded, the only remaining source of interference that came to our minds was a prolapse of the vessical mucous membrane into the eye of the catheter; to test this, a stylet was passed into the instrument, and when it had nearly reached the end, a soft body was distinctly felt and the patient exclaimed, "You're sticking something into me and you promised not to cut me." This positively proved the nature of the accident, as by no possibility could the stylet have passed through either eye and touched the mucous membrane external to the catheter.

The callibre of that portion of the catheter in immediate relation to the joint being smaller than the portion above and below this point, the stylet must have been nearly or quite passed through the centre of the instrument and in contact with neither wall.

The diagnosis being satisfactorily made and proven, the next question was the best method of treatment. Traction failed completely, although considerable force was used, and the patient vigorously protested; then forcing air into the catheter was tried, but this simply resulted in the air passing into the bladder through the open eye (there being two fenestra in the instrument).

Injection of tepid saline water was suggested, but deemed insufficient to meet the requirements, as it would simply pass into the bladder as the air had previously done, and furthermore we had no proper syringe and the patient was becoming restless and freightened.

Deciding to take the risk of serious injury resulting from sudden violence, I gave the catheter a smart twist between my thumb and finger and distinctly felt the instrument suddenly become free and it was at once easily removed.

The catheter contained a few drops of blood and was followed by a few more.

The patient was at once relieved and comfortable, suffering no pain or inconvenience resulting from the retention of the instrument in the urethra and bladder or the method of removal.

I did not see the case again for three days, but the doctor reports that she had no further urinary difficulty or pain, being able to empty the viscus herself. However, he stated that she had a slight chill, high fever, abdominal pain and tenderness of the uterus the following day, but feels confident that these symptoms had no relation to the vessical difficulty.

The patient made a good recovery.

The catheter used was an ordinary silver, sectional, female catheter of Tiemann's manufacture having two oval eyes near the extremity. These fenestra were unusually small, being one-quarter of an inch in length and slightly less than one-eighth of an inch in their tranverse diameter. The edges of these eyes were very thin and sharp.

A SIMPLE TREATMENT OF CONGENITAL CLUB-FOOT.

The common form of congenital club-foot is that in which the heel is raised and the sole twisted inwards. The speculation has been ventured upon, that the deformity may be the result of the adaptation of the foot to the restricted accommodation of intra-uterine life. Whatever be the cause in many if not in most of the cases of congenital talipes equino-varus a permanent shortening of the tendon of Achilles is the head and and front of the offending. When this tendon has shortened to the utmost in the elevation of the os calcis it can contract still further by effecting a rotation of the bone upon its antero-posterior axis, the astragalus also participating in the inversion.

The "simple treatment" about to be described in no way refers to those varieties of slight deformity which can be effaced by massage or manipulation or by the education of a splint of tin, nor on the other hand, does it refer to those deformities of later childhood in which all the structures concerned have become rigid, misshapen and displaced.

The ordinary course of dealing with an infant's foot in which the heel was firmly elevated and the sole faced directly inwards, one or more of the tibial tendons were divided, the foot secured in a Scarpa's shoe for the correction of the inversion. When this was accomplished the tendon of Achilles would be divided and the heel gradually brought down by means of the working of a cog-wheel at the ankle. Precautions for weeks or months subsequent had to be taken to provide against a relapse. Those who have had much to do with Scarpa's shoes will agree in this; that excellent as they are, they are costly; that in hospital practice at least they are apt to get out of repair; that the little patient has a marvellous knack of getting his small heel from out of the depth of the shoe; that the infant requires almost daily surgical supervision; and that, even when the greatest care is being exercised, the localized pressure of a strap is apt to excite general irritability or distress and to excoriate the foot. By substituting a plaster of Paris bandage for the shoe, in many cases the tendon of Achilles only needs division. About three or four days after this slight operation, put the foot into a thick sock which fits evenly and smoothly. From the cleft of the toes to a few inches above the ankle, the foot is to be quickly and firmly incased in the wet plaster bandage, and immediately the foot is to be forcibly manipulated, so that as the plaster is setting it may be steadily held in a position toward flexion and eversion. When the plaster is hardened the tip of the sock should be cut off in order that the toes may be exposed to view. Should they seem swoolen or conjested remove the bandage at once; but if not, the cast may be left on two or three weeks. At the end of that time it should be removed by finding the end of, and unwinding, the bandage. The foot should be rubbed with oil and again enclosed as before, only as the plaster is hardening this time the position is to be absolutely rectified. In another three or four weeks the foot may be again examined and then put up as before or fitted with a stiff leather boot, when the patient lives at a distance the former course is desirable, least from imperfectly executed manipulations a relapse follow.

The bandage should be about two inches wide and two yards long. It should be made of "cross-wove crinoline muslin" and this should be boiled to free it of the stiffening or size. When dried its meshes can be more easily and thoroughly impregnated. The plaster should be quite fresh and of that fine quality used by dentists. A most important point is that the impregnated bandages be loosely rolled so that when put into water every molecule of plaster may be immediately wetted. The roller must be dipped, not soaked, in the water, and should be applied dripping wet, for squeezing it drier in the hand involves the loss of much valuable plaster from its folds or meshes. A little common salt should have been dissolved in the water to hasten the setting of the plaster. A handful of sugar in the wash basin will aid in freeing the operator's fingers and nails of the tenaciously adhering plaster.—Dr. Edmund Owen, F. R. C. S., in *Lancet.*

CONCENTRATED SOLUTIONS OF SALINE CATHARTICS IN DROPSY.

Dr. Matthew Hay, Demonstrator of Prac. Mat. Med. in the University of Edinburgh, investigating the effect of the administration of a saline cathartic on the concentration of the blood, succeeded in demonstrating from experiments on man and the dog, that if the salt be given in the form of a concentrated solution when the alimentary canal contains little or no fluid, it produces an almost immediate and very decided concentration of the blood. If the salt be given dissolved in sufficient water, or if the alimentary canal contain sufficient fluid at the time the salt is administered no such concentration of the blood occurs. In the former case the hæmatic concentration is great, and quickly produced, reaching its maximum within half an hour after the ingestion of the salt.

After giving three-quarters of an ounce of sulphate of soda dissolved in three ounces of water to a man, the number of red corpuscles in each cubic millimeter of his blood rose from about 5,000,000 to 6,790,000. This excessive state of concentration does not last long. The concentration is reduced to the normal in about four hours, by the abstraction of lymph and other fluids from the tissues. These alterations of the volume of the blood take place apparently without any corresponding change of blood pressure.

Some hours after the first, the blood undergoes a second concentration less in degree but lasting for the greater part of the day; this is evidently due to the diuretic. Doubtless, during this period, also, as during the first concentration, the tissue fluids are being drawn upon.

From these remarks it will be readily understood how that a concentrated solution of a saline cathartic ought to prove of considerable service in certain cases of dropsy, when, owing to the great accumulation of transuded serum in vital parts, and elsewhere, there is imminent danger to life and an urgent need for an immediate and active removal of a portion of the transuded fluid. In such cases the value of saline and other active cathartics has long been appreciated; but I am not aware that use has been made of the more powerful action of a concentrated saline cathartic. It removes the dropsical fluid by two channels; by the intestines and by the kidneys. No other purgative has this double action. It is questionable, also, if any other purgative acts so rapidly in reducing the fluids of the blood. It is almost perfectly certain that no other purgative excites intestinal secretion so powerfully, and at the same time produces so little irritation of the intestinal mucous membrane, and so little disturbance of the body generally. This is an additional recommendation for the employment of the concentrated saline. The diluted salt, the form in which it is always given, has practically, in so far as it affects dropsical fluids, the action only of a cathartic. Upon these considerations, trials of the concentrated salt have been made in suitable cases of dropsy, and in most of them with very satisfactory results.—*Lancet.* H.

RHEUMATIC ENDOCARDITIS.

In a communication to the *British Medical Journal*, Dr. Maclagan gives two practical reasons why salicyl compounds fail to counteract the cardiac as they do the arthritic inflammation: first, that the cardiac mischief has generally commenced before the patient comes under observation; and, second, that rest, which is the essential to the recovery of an inflamed organ is unattainable in the heart. He makes the striking statement, that everything which recovers in a joint, recovers also in the heart. The one structure which does not recover in the heart, the endocardium, has no analogue in any of the structures of a joint.

The fibrous rings and valves of the heart are similar in nature and function to the fibrous structures of a joint. The pericardium has its analogue in the synovial membrane. Each is very vascular; each secretes a lubricating fluid; and each facilitates the movements of a solid body. These analogues are apt to be the seat of rheumatic inflammation which tends to spread, and in both the tendency is to recovery.

The endocardium has no analogue in a joint. It bears no resemblance, anatomically or physiologically, to any structure in a joint. It is a non-vascular membrane, in which inflammation cannot spread. When it is affected in acute rheumatism, there is no general inflammation of its surface, such as is found in the pericardium and synovial membrane; the mischief is limited to a small portion of the affected valve. The lymphy deposits, which constitute the endocardial lesion, are not caused by the direct action of the rheumatic poison, but by the mechanical rubbing against each other of valvular segments. This rubbing is produced by the thickening of the fibrous structure of the valve. This inflammation and thickening of the fibrous structure of the valve may be recovered from, but the roughening of the non-vascular endocardium remains, from the want of blood vessels to aid and promote absorption. Being produced mechanically no drug can exercise any control over it. If the heart complication is noticed early enough, the inflammation and consequent thickening of the fibrous structure may be prevented by the free use of the salicyl compounds. The possibility of such a result is worth striving for, and can be attained only by giving the drug in large and frequent doses. Salicin is preferable to salicylate of soda because it is less liable to disturb the system and necessitate its suspension. From twenty to forty grains should be given every hour for six hours, or until pain is relieved; the same dose continued every two hours until temperature is at or near normal. The ordinary dose of fifteen or twenty grains every three or four hours is not nearly enough to give the full curative effect of the drug. When the temperature is reduced to normal the intervals between the doses should be increased to four or six hours for ten or twelve days.

The writer insists that every case of acute rheumatism should be regarded and treated as one in which heart complications may possibly be prevented. Every hour is of importance, and the recognition of the fact that the course of acute rheumatism may in many cases be arrested within twenty-four hours of the time that treatment begins, is the keystone to all possible success in the prevention of cardiac complications.

H

INUTILITY OF ANTISEPTIC INHALATIONS IN PHTHISIS.

The principal substances used are phenol or carbolic acid, creosote, thymol and iodine.

Phenol coagulates albumen, is a powerful antiseptic and poison, and acts as a caustic on the skin. One part of it dissolves in 10.7 parts of water. The books say nothing of its volatility. To test this a number of experiments were carefully performed; 0.5 gram exposed to the air lost .0035 in two hours, and .0071 in four hours. Other experiments showed that the volatility of phenol was *exceedingly slight.* It is difficult to suppose that the small amount of phenol which disappears during inhalation can exercise any great influence on phthisis, even if the whole amount were effective; but part is lost in respirator, a still larger part is absorbed by the membranes of the mouth and throat. It is exceedingly doubtful if any part reaches the air cells of the lungs. The sputa in several instances after inhalation showed no indications of carbolic acid.

Creosote is slightly more volatile than phenol. In numerous experiments with the substance it was found that the greater part of the creosote remained in the sponge of the inhaler, and little, if any, reached the lungs of the patient.

Iodine is very volatile, and was found to have almost entirely disappeared from the inhaler, and might be supposed to have reached the lungs. Testing the saliva and mucus of the month and throat with starch, no free iodine was found. Applying an acid, the blue color was freely developed, showing that a *iodide* was formed, the antiseptic properties of *iodine* being entirely destroyed.

The conclusion from these experiments seems to be that antiseptic inhalations are useless, since they do not reach the seat of the disease.—Arthur Hill Hassall in *London Lancet.*

BISMUTH AS A SPECIFIC FOR CANCRUM ORIS.

BY C. J. MACGUIRE, M. D., NEW YORK.

The author had under his care twenty-four cases of this affection, in most of them the disease having followed measles. As to the accuracy of his diagnosis, he is careful to guard himself by giving the testimony of other physicians. Four of his cases were fatal, and those four before he instituted the bismuth treatment, but under this treatment all of the remaining twenty recovered, though many of them were cases apparently hopeless. Such a percentage of recoveries, the author justly remarks, has hitherto not been met with. His method of using bismuth, and the progress of some of the successful cases, may be given in his own words.

On May 11 I was informed, upon my entrance to the ward, that still another child was, in the words of the sister, "getting the frightful disease in the mouth." This child, Katie H., aged seven years, I examined, and found she had a small ulcer on the inside of the left cheek, with all the characteristics described in the early stages of the other cases. I confess I was in despair. On consideration, I came to the conclusion that following in the old rut of treatment was almost useless, if not quite so. By a process of reasoning, or by accident if you will, I conceived the idea of applying locally the subnitrate of bismuth. After thoroughly cleansing the mouth with a disinfectant lotion, I covered the ulcerated surface with this drug, and the next day, May 12, the grayish slough had partly cleared away, and the fetor, which had been most disagreeable, was sensibly lessened. The hardness of the cheek, if not less, had not increased, and the child was not so thirsty. Temperature, 99° Fahrenheit; pulse, 90. Gum on upper jaw reddish purple, soft and tender. Mouth washed out with solution of carbolic acid; bismuth applied every three hours; syr. ferri iodid., cod-liver oil, and generous diet.

May 13: Fetor markedly less.

May 14: Much better, sleeps well, ulcerated parts getting a healthy appearance. From this date to the first of June, when she was discharged thoroughly cured, the patient did well. On May 12, after witnessing the happy change effected by the bismuth in the case of Katie H., I determined to try its efficacy on Arthur W. and Nellie H., both of whose cases we looked upon as hopeless. On May 10 I had removed some teeth, together with a large piece of the superior maxilla, from Arthur W. His cheek was then swollen tense, a large black gangrenous ulcer was on its inside surface, and his eye was nearly closed. The stench from him was intolerable. Usual disinfecting and supporting treatment continued.

May 11: No change.

May 12: Filled up cavity in cheek with bismuth, first cleansing it out well with disinfectant wash, and repeated every three hours.

May 13: No marked change, except odor a little lessened.

May 14: No increase of gangrenous erosion. Treatment continued. Separation of a large mass of grayish black slough from ulcer on cheek and cavity whence exfoliated bone was removed. Parts looking healthier, fetor less.

May 18: Fetor nearly disappeared in toto! Takes food freely; sleeps better; ulcer assuming a very healthy appearance; swelling and hardness of the tissues of the cheek rapidly subsiding.

May 25: Ulcer on inside of cheek quite filled out and granulating kindly. Removed small piece of dead bone from superior maxilla. Otherwise doing well. Treatment continued. From this date to July 1, when discharged cured, the patient did excellently well. Since then he has been taking cod-liver oil, and is now in perfect health. Nellie H. ran the same course, up to May 12, as the two preceding. Her condition at that time was identically the same—black gangrenous slough on buccal mucous membrane, swelled cheek, etc. Applied treatment as in the last case.

May 13: Clipped away with scissors a considerable amount of disintegrated tissue, then packed parts with bismuth. Continued treatment to 17, when I removed a large piece of exfoliated bone and several teeth from inferior maxilla. From this date to June 15 she slowly but steadily improved, the bismuth being regularly applied, and the mouth thoroughly syringed. Iron, cod-liver oil, and generous stimulating diet administered. She is now one of the healthiest children in the institution, though showing the loss of hard and soft tissue, but *not* showing the horrible deformity which formerly cases that recovered under ordinary treatment suffered from.—*New York Medical Record.—Edinburgh Medical Journal.*

THE RELATION BETWEEN RUBEOLA AND MORBILLI.

In 1874, Dr. Kassowitz expressed his opinion as against the existence of a specific rubeola, claiming that sufficient proof of it had not been brought forward. He now takes pleasure in reporting from his own observation a very extensive epidemic of Rotheln, during which in no single case a transmission from Rotheln to genuine measles could be demonstrated. The symptoms and course corresponded with the descriptions of Emminghaus, one-third of the cases showing distinct enlargement of the cervical lymph glands. The contagiousness was undoubted, the incubation was between fourteen and twenty days. According to K.'s observations, rubeola is entirely distinct from morbilli, yet the resemblance is so apparent that he must confess that Rotheln stands closer to measles then any other disease known to us, and perhaps, he suggests, this resemblance depends upon some micro-organism as yet unknown. He supposes between measles and Rotheln, as between variola and varicella, some connection, but leaves the question undecided. The analogy between variola and varicella on the one hand, and morbilli and rubeola on the other hand, might perhaps consist in this, that *very exceptionally* from the infection of varicella, variola might arise; from the infection of rubeola, morbilli might arise. In a debate on this question in the London Medical Cóngress, Cheadle reported an epidemic of mild cases of rubeola closely followed by severe cases, which might have given rise to a suspicion of transmission of rubeola into morbilli. K. recalls, with a side-glance at the micrococci, that micro-organisms are made either benignant or malignant at the will of the experimentor. Variola and vaccinia, which, although their eruptions are so similar, are yet clinically so widely separated that they are always considered two different diseases, are, in fact, probably identical. Vaccine is variola virus changed by transplantation to another species of animal. He remarks that even the transmission of variola by variolation makes the disease more similar to vaccinia, in that it runs a milder course, and the pustules occur only at the point of inoculation; on the other hand, vaccinia in children who suffer from an extensive moist eczema, often on the tenth or eleventh day causes an extensive pustular development upon the eczematous surfaces, perhaps because the increased fluxion to the diseased portions of the skin carries a greater quantity of micro-organisms. "Let us, then, not be in too great haste to divide once, and for all, from our present stand-point of scientific observation the cord between rubeola and morbilli, and between variola and varicella."—*Wien. Med. Blatt.*—*American Journal of Obstetrics.*

ANTISEPTICS AT VIENNA.

A correspondent of the *Canada Medical Journal* observes that irrigation now used in Professors Billroth's and Albert's wards is quite as troublesome as the spray. Carbolic acid (one to thirty) is always employed, the parts to be operated upon being thoroughly washed and kept irrigated with this until the knife is used. In amputations the flaps are thoroughly irrigated for two or three minutes before they are brought together; and even after the parts are adjusted the cavity of the stump is again washed through drainage-tubes previously introduced, all superfluous acid being squeezed out. Whatever antiseptic is used in the subsequent dressings, the previous irrigation is always performed with carbolic acid. Iodoform is always used as *iodoform gauze*, which is prepared by drawing gauze through an alcoholic solution of resin, to which half its quantity of glycerine has been added. The iodoform is then dusted on as long as it will adhere. An ounce of iodoform is sufficient for thirty yards of gauze. It is used in nearly all operations, but especially in those about the mouth and throat; and Billroth considers that in these it is the direct cause of saving many lives. It is a well-known fact that after these operations death often follows from pneumonia and general septicæmia, the former of these being very insidious and rapid in its course. There is no doubt whatever of the high antiseptic qualities of iodoform. Billroth declares that there is no antiseptic which is so trustworthy in rendering foul wounds sweet, carbolic acid being preferred only because of its convenience and cheapness. Great stress is also laid upon the so-called anti-tuberculous properties of iodoform, which, according to Mosetig-Morhof, has peculiar power in destroying the tuberculous granules and setting up healthy granulations in their place.—*Medical Times and Gazette.*

WHY IS THE HEAD PRESENTATION THE MOST FREQUENT?

The causes which determine the position of the fœtus *in utero* have long been a subject for argument. There can be no question that the action of gravity is the most constant of the forces acting on the fœtus. Dr. Matthews Duncan has shown that the position into which the action of gravity, if unopposed and unmodified, would bring the fœtus, is that which it actually does assume and we may therefore conclude that gravity is not only the most constant, but the most powerful of the forces which determine the fœtal position *in utero.* But it is not the only one, for if it were, living children at term would always present with the head. Sir James Simpson involked the movements of the fœtus, his theory being that when the fœtus presented by another part than the head, its shape was not so well adapted to that of the uterus, certain parts of it were unduly pressed on, and thus reflex movements were excited, the effect of which was to put the fœtus in a more comfortable position. In a recent number of the *Archiv für Gynäkologie*, Dr. Meek elaborately studies the effect of the fœtal movements with relation to the position the child assumes *in utero.* The answer which he gives to the question, Why does the fœtus present oftener with the head than with the breech? is the following: That part of the uterus which lies within the pelvis, and (being surrounded with a bony ring) is unyielding, while the rest is very yielding, retains the head of the fœtus longer than the breech on account of the different length of the leverage exerted by the upper and lower limbs of the child respectively. Extension of the fœtal limbs alter the position of the child more easily if they come in contact with the hard, unyielding pelvis segment of the uterine wall (as is the case in breech presentations) than if with the more roomy, and yielding part of the uterus which lies in the abdominal cavity, as in head presentations. The movements of the lower extremities exert a greater effect in altering the fœtal position than those of the upper, because the lower extremities are further from the centre of the child's body, and therefore act with more powerful leverage.—*Medical Times and Gazette*, London.

A COMMUNICATION IN REGARD TO ONE HUNDRED AND THIRTY-ONE CASES OF CARCINOMA OF THE BREAST, OPERATED UPON IN VOLKMANN'S CLINIC DURING THE YEARS 1874-78.

This is a condensation of a contribution to Langenbeck's *Archiv* consisting mainly of statistics. Puerperal diseases have occurred in many of the cases. About thirty per cent. of those who had borne children, and afterward were afflicted with cancer, had suffered from mastitis. One is very likely to draw certain inferences from this fact. The site of the disease was most frequently upon the upper and outer side of the breast. Infiltration of the glands in the axilla usually followed the first appearance of the growth, after fourteen months, union with the skin after sixteen months, with the muscles after eighteen months. Ulceration occurred, upon an average, after twenty months. Metastases were observed, upon an average, two years after the local affection first made its appearance, and they were almost invariably accompanied by glandular infiltrations. He does not think that clinical facts support Török and Wittelshöfer in their statement that an extension of carcinoma along the direct course of the blood circulation is relatively common. The question of recurrence is all important. After the first operation, the average duration of time before the re-appearance of growth is eight months, after the second it is seven, after the third it is two months. When the breast alone is amputated, the disease often returns in the axillary glands, but if these glands have been removed, the recurrence is not usually in the axilla. Of the cases tabulated, twelve were radically cured, more than three years having elapsed since the operation was performed. It is all important that the operation be performed early in the history of the tumor. Out of twenty-nine of the tabulated cases in which there was no glandular infiltration, six were cured, while of one hundred and two cases in which the axillary glands were involved, only nine were cured. Three of the fifteen cases recorded as cured, died of cancer not of the breast, after more than three years of immunity from the disease, leaving only twelve, as already stated, which could be looked upon as radically cured.—*Centr. f. Gyn.—American Journal of Obstetrics.*

TRANSIENT PARALYSES IN ASSOCIATION WITH PARTIAL EPILEPSY.

M. Dutel has recorded in the *Revue de Medicine* some very carefully investigated cases of this association. The class of cases referred to are those, when a person has a convulsive seizure localized to one side of the body, followed by a transitory loss of power in the part convulsed, the loss of power lasting from a few minutes to a day or two. It is important not to confound this class of cases with those where a permanent hemiplegia is associated with attacks of partial epilepsy, such being always cases of destructive brain-lesion within the motor area, or even to a peripheral lesion. M. Dutel accepts Dr. Hughlings-Jackson's view that the paralysis in this case is due to temporary local exhaustion of that portion of the brain which has been the seat of the discharging lesion, but, curiously enough, he does not see his way to applying the same reasoning to ordinary cases of epilepsy and refuses to consider the state of complete resolution which supervenes on an epileptic seizure as a total paralysis. The practical point to be gathered from this study—and it is a very important one—is, that if a person dies with some paralysis not long after a convulsion, and no gross lesion of the brain is found, we are not to conclude that there is no truth in the doctrine of cerebral localization, as the case may be one of partial epilepsy. One cannot help thinking that a good many of the cases recorded by the older writers, which have been quoted as proof of the non-existence of any special motor region in the brain, would probably receive a correct interpretation by being classed as cases of partial epilepsy associated with transient paralysis.—*Medical Times and Gazette.*

THE USES OF CREASOTE.

Hager finds that consumptives and sufferers from chronic catarrh improve under its use, but only when true creasote, and not carbolic acid, is employed. It increases the general nutrition of the patient. Its anti-asthmatic action is also well marked. The dose should be as small as possible, but often repeated. The proper doses for an adult are two to four centigrammes two or three times daily. The maximum single dose is five centigrammes (three-quarter grain), and the maximum for the day two decigrammes. The *pilulæ kreasotatæ* contain 0.0167 grammes (one-quarter grain) in each pill. Consumptives in the last stage may take two or three of these pills two or three times a day, according to bodily size, and, if they feel tolerably well after some days' use, they should take two or three pills uninterruptedly night and morning, dropping them, perhaps, one or two days a week. Pure creasote is pale yellowish, exudes an oily liquid, and is of specific gravity 1.06. The specific gravity should be fixed at 1.050 to 1.080, as the lighter creasotes are either impure or not properly creasotes at all. Creasote is best administered in pills. The pilular mass is made by melting together two parts of yellow wax and one of creasote, to which other suitable ingredients are added in form of powder, as quinine, salts, salicylic acid, gentian root, etc. Any addition of ether or spirits of wine, to give consistency to the mass, should be avoided, and is not necessary.—*Analyst.*—*Practitioner.*

MASTURBATION AS AN ETIOLOGICAL FACTOR IN THE PRODUCTION OF GYNIC DISEASES.

Dr. Chapman (*American Journal of Obstetrics*)closes a thorough and valuable paper on the above subject with the following conclusions:

(1) That masturbation exists to a considerable extent in women.

(2) That is accomplished, as a rule, by manipulation of the external parts.

(3) That its accomplishment by the introduction of foreign bodies into the vagina is in this country (Scotland) rare.

(4) That decided and constant changes of the external organs of generation result from its long-continued practice.

(5) That the presence of such changes (which are fully described in the paper) is sufficient to warrant the assumption of the existence of the habit.

(6) That by judicious questioning and the avoidance of making accusations of moral obliquity to such patients, this assumption may be strengthened and in many cases confirmed.

(7) That, apart from the use of any mechanical dilating means, masturbation is capable of producing very marked relaxation of the vagina.

(8) That retroversion of the uterus is of such common occurrence among masturbators that its existence in an unmarried nullipara should always be regarded with extreme suspicion.

(9) That the same suspicion should be shown on the occurrence of leucorrhea and menorrhagia *together* in similar patients.

(10) That ovarian pain and even chronic ovaritis may be set up by the habit.

(11) That many other affections of the female generative organs may also be thus occasioned.

(12) That masturbation has so frequently a distinct etiological connection with disease of the pelvic organs, that its recognition will often prove a valuable aid towards forming a prognosis in, and directing a line of treatment for, many uterine complaints in the unmarried.

BENEFIT OF IODOFORM SHOWN IN BILLROTH'S CLINIC.

Dr. Wölfler states (*Allg. Med. Woch.*) that the statistical data of 1882 furnish the interesting fact that the percentage of mortality in Professor Billroth's clinic presented an enormous difference to that of 1881; for while in the former year it was only 6.3, in 1881 it was 9.5; and he attributes this difference in a great extent to the far more frequent use of iodoform. Among the other unjustifiable objections which have been taken to the employment of this valuable medicinal agent is its liability to induce erysipelas; but how erroneous this statement is, is shown by the fact that there are under its use far fewer wound-diseases than formerly. In the year 1881 there were eight hundred and eighty-two patients treated in the clinic, of which number eighty-two, (9.5) died; while of the seven hundred and twenty-two patients treated in 1882 only forty-five (6.3) died. After operations only seven persons (0.9) died, and from accidental wound diseases there died 1.42 per cent.—*Medical Times and Gazette.*

MORBID CHANGES OF THE THROAT, LARYNX, AND AIR-PASSAGES IN SOME ACUTE INFECTIOUS DISSASES.

Dr. E. Lori, Budapest (*Jahrb. f. Kinderh.*, XIX, I) in measles, twelve to thirty-six hours before the appearance of the skin rash, there is a diffuse or macular hyperæmia of the mucous membrane of throat, larynx, and air-passages, diffuse usually in the mouth, macular on the tonsils and back of the throat. Within twelve hours from the appearance of this hyperæmia there occur small papules, first on the palato-glossal folds. About the time that the skin eruption appears there is profuse catarrh of the pharynx, larynx, and trachea, with rapid shedding of epithelium, and frequent formation of superficial erosions. In the trachea the swelling around these latter may give rise to stenosis. According to the writer, the appearance of such ulcers in the larynx augurs the occurrence of tuberculosis. In scarlatina the throat is affected twelve to thirty-six hours before the outbreak of eruption. The writer states that there is often a sudden disappearance of the affection of the mouth and pharynx co-incident with the eruption on the skin coming out. Frequently the eruption in the mouth closely resembles that found with measles. In rubeola there is also hyperæmia, diffuse or spotted, of the larynx and trachea. In small-pox the mouth is affected at the same time as the skin.

The pustules are small and imperfectly filled, dry up in two or three days and in six days are only represented by red spots. Bleeding from them is very common. The writer recommends the use of ice poultices around the neck, ice internally, and such astringents as tannin applied after puncture of the pustules.

In chicken-pox there occurs either diffuse hyperæmia of the mucous membrane, or a few scattered pustules. In typhus and typhoid, acute catarrh of the pharynx, larynx, and trachea is of frequent occurrence, and often proceeds in the larynx to the formation of ulcers, which have little tendency to heal, and occasionally, about the sixth or eighth week of the disease, cause perichondritis. For this latter condition, "when diagnosed with certainty," the writer recommends tracheotomy as early as possble. In whooping-cough there is usually some catarrh of larynx and trachea, and bleeding from the mucous membrane is frequent. The appearançe, during the course of whooping-cough, of ulcers in the larynx the writer regards as very suspicious of the onset of phthisis.—*Edinburgh Medical Journal.*

HYPODERMIC INJECTION OF ERGOTINE IN PROLAPSUS ANI.

In a thesis by Dr. Jette he describes what he has observed of this treatment, first introduced at the St. Louis Hospital by M. Vidal. The preparation is composed of one gramme of Bonjean's ergotine and five grammes of cherry-laurel water. It should be freshly made, so as to be of a limpid color and fresh and agreeable odor. The injections are made every other day, commencing with fifteen drops, and, if this is insufficient, going on to twenty or twenty-five. This amount is inserted very slowly into the fibres of the sphincter to the depth of from two to four centimetres. Severe lancinating pain is caused, which then becomes dull and continuous, only ceasing after some hours. After three or four injections contractions of the sphincter and fibres of the intestine commence. A sense of constriction and traction upwards is felt by the patient and observed by the surgeon. Various disturbances may take place; thus, if the doses of ergotine are too weak, there may be frequent desires to go to stool and to pass urine; and when they are too strong there may be spasm of the neck of the bladder, with temporary retention of urine. In some persons M. Vidal observed a tendency to vertigo or syncope, and painful præcordial constriction, with a hard, close, somewhat slow pulse. The latter injections become more active, as if cumulative, and cause a more prolonged tenesmus than the early ones. The duration of treatment varies from a few days to some weeks, and seems quite independent of the solution employed, the dose injected, and the intervals observed. To render the cure certain when once effected, it is of importance that three or four supplementary injections should be made.—*Revue de Thérapeutique.*—*Practitioner.*

DIARRHŒA AMONG INFANTS.

Among other forms of diarrhœa, the writer aludes to the cerebral, and says, "Diarrhœa may assume a cerebral form,—that is, it may be accompanied by certain cerebral phenomena or by eclamptic convulsions even although the diarrhœa may be but slight. As a result of a profuse drain, comatose condition may be developed. Again, meningeal symptoms may develop and meningitis be simulated." Many of the reported cases of meningitis with recovery are, the writer thinks, only cases with meningitic symptoms. The various forms of diarrhœa are discussed in detail. For the treatment of cholera infantum the writer recommends, (1) preventive measure to be adopted during the premonitory catarrhal stage, and (2) after the full development of the affection, alcohol internally and externally and mustard baths.—*Gaz. des Hôpitaux.—Edinburgh Medical Journal.*

MISCELLANEOUS ITEMS.

Note on Diagnosis of Eczema.—"It is in general safe to say, never hastily decide that patch of cutaneous disease to be eczematous where you can take a pen or pencil and distinctly outline the involved area at every point." "On Certain Cutaneous Affections of the Hands," by Dr. Nevins Hyde.—*Philadelphia Medical News.—Edinburgh Medical Journal.*

The local treatment of diphtheria, by S. Korach (*Deutsche Med. Wochensch.*) records the results of his treatment of one hundred and twelve cases by iodoform, and asserts that this is infinitely the best local application for diphtheritic patches. He used the following solution, painted on six times daily: Iodoform, 2.5 grammes; ether, 25 grammes; balsam of tolu, 5 grammes.—*Edinburgh Medical Journal.*

Subperiosteal Resections.—An interesting record of the results of this operation is afforded in the following case: The operation was undertaken in April, 1871, in consequence of a bullet fracture of the humerus. Two years later the patient was able to return to his work as a stone mason, and the arm presented in every respect a healthy appearance, with the exception of a paralysis of some of the radial muscles. All went well, and the patient remained at work till July, 1882, when some inflammation appeared in the arm, and in September it was amputated at the shoulder joint, in consequence of severe inflammation. The examination of the arm confirmed the diagnosis of ostitis in the new bone. The patient made a good recovery.—*Bulletins et Mémoires de la Société de Chirurgie de Paris*, December, 1882.

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ORIGINAL ARTICLES.

PORTIONS OF AN ADDRESS BEFORE THE ASSOCIATION OF PHARMACEUTICAL ALUMNI OF THE UNIVERSITY OF MICHIGAN, AT THE MEETING OF JUNE 27, 1881.

BY HUGO THUM. PH. C., GRAND RAPIDS, CLASS OF '78

. . . . We are invited by the constitution of our Association to co-operate with our Alma Mater in the development of thorough education in pharmacy. And to note—still further than in other years we have done—the advances that have been and are being made, both in requisites for entrance, and in the college work, is a cause of gratification to every one of us.

From the organization of this school, in 1868, its required studies have included general chemistry, materia medica, pharmacy, toxicology, analysis of urine, qualitative analysis, and pharmaceutical preparations. Quantitative analysis and organic analysis were optional until 1872, after this they were added to the requirements. Botany was optional until '73, when it was made required. Microscopical botany was given as an optional study to the class of '75, by Professor Harrington, and was made required for the class of '76, and has since been continued. This establishment of a microscopical laboratory was practically the beginning of systematic work of students with the microscope in this university, and at first the pharmaceutical students formed the larger number of those using the microscope. The use of this instrument has so extended that now one hundred and sixteen microscopes are in use in the university.

The school of pharmacy uses about twenty instruments, in two sections, successively, in pharmaceutical botany, and about the same number in the analysis of urine.

The number of lectures delivered during the course is about six hundred and fifty, of which one hundred and ninety-five are delivered on pharmacy, sixty-four on materia medica, sixty on botany, twelve on toxicology, eighty on qualitative chemistry, thirty-six on quantitative chemistry, twelve on crystallography, and eighty on organic chemistry.

The time required in the chemical and botanical laboratories is somewhat over one thousand five hundred hours, of which about two hundred and fifty are occupied in pharmaceutical preparations, five hundred in qualitative analysis, two hundred and twenty-five in quantitative analysis, ninty-five in micro-botany, and four hundred in the branches of organic, toxicological and urine analysis.

. . . . It is gratifying to observe that the standards of education in other schools of pharmacy—such as we have seen these standards to be—are undoubtedly advancing, and that greater numbers are everywhere seeking to obtain education in schools.

We are not only called upon to foster pharmaceutical education everywhere, and to contribute towards the advance of Pharmacy as a science, but to aid by our example and influence in its recognition by the public as such, and to aid in the protection of society against dangerous abuses. To present to those of our number who are about entering upon the duties of our chosen profession those questions which are occupying the minds of all friends of pharmacy in America, as well as in other countries, is one of my objects at this time.

It has become a recognized fact by those who have given the subject their attention that Pharmacy in the United States, from a business point of view, has been in certain particulars retrograding for the last twenty years. All measures to the contrary have not been able to perceptibly change this unfavorable tendency, and bring the profession to that elevated position to which it is entitled. This state of affairs is in a large measure attributable to the fact, that it has become a too easy matter for the average business man to carry on the larger portion of what is called the retail drug business.

The pharmacist has, in the course of time appropriated many branches of trade which are not in his domain, and to deal in which requires no special education. For instance, toilet articles, fancy goods, soda water, cigars, holiday goods, paints, oils, etc. The trade thus being enlarged has offered business to a larger number, than had drugs and medicines remained the only articles handled, until at present a district, which would support one pharmacy proper, furnishes a livelihood to quite a number of retail drug stores.

Patent medicines are constantly increasing in sale, and the greater portion are still sold by druggists. The advertisements of the makers acquaint the public with their supposed qualities, and all that is to be done is to take the desired article from the shelf, wrap it up, and hand it to the customer. This requires no knowledge of pharmacy in one disposed to sell them.

Another class of goods which may be classed with patent medicines, are introduced into the drug business mainly through the agency of physicians; among them are the various bottled elixirs of bark, syrup of hypophosphites, emulsions of cod liver oil, extracts of malt, bromidia, white pine expectorant, etc. These articles, having once been prescribed by the physician, are called for by the patients, should they think it desirable to continue their use, and to sell these goods requires no special training.

The manufacturing chemist also aids the ignorant in the dispensing department by putting up his remedies in proper doses in the shape of pills, tablets, etc., by making all his preparations for him, even large quantities of the most simple tinctures. Indeed the waters, and simple syrups, are furnished by the manufacturing chemist.

Under these circumstances many take up the business without the least knowledge of it, attracted by the popular, exaggerated idea of its profits. Patronage is sought by cutting prices, sometimes so much as to be below the cost of prime goods, especially with articles which cannot be judged by the purchaser. However, there is another factor already at work to counteract the unfavorable changes under consideration. Those branches of our trade which can be conducted without special education are being taken up by other tradesmen.

. . . To protect the public and to prevent competition by unqualified persons, the pharmacists of many states have induced their respective legislatures to enact laws for the regulation of the practice of pharmacy. In many cases, these laws, if enacted as drafted, would go far towards attaining their objects, while in fact they have been so far altered by amendment after amendment, that their value has become quite questionable.

That the pharmacists of Michigan have not secured the enactment of legislation in the interests of the profession is the subject of some comment in the pharmaceutical journals at the present time. At our previous meetings we have deliberated on the advisability of undertaking some movement in this direction, and one year ago the following report was accepted, as representing the views of the association:

WHEREAS, It is evident that the public ought to be protected by law against the practice of incompetent pharmacists, and

WHEREAS, it is seen that incompetent pharmacists are being excluded by law from the two states next on the west of Michigan, while legislation is now actively urged for the exclusion of unqualified pharmacy in the states next on the south and southeast, as indeed in most states of the Union, therefore

Resolved, That as a body of active pharmacists, pledged by our education to the support of good progress in our profession, we recognize the need of a law for the regulation of pharmacy in Michigan, to be enacted before the State shall become an asylum for pharmaceutical refugees from just examinations in the northwest; and we pledge ourselves to the support of all suitable efforts in a movement for a pharmacy law in Michigan, whenever such a movement shall be instituted; and

WHEREAS, It is enough for schools of pharmacy to meet a spontaneous demand for due professional preparation, and this demand always brings to our Alma Mater numbers fully as large as are favorable to its interests, therefore

Resolved, That any movement for a pharmacy law in this State, must be and may be known to be an effort of the profession of pharmacy for the protection of the public, and not an effort for the support of pharmaceutical education, and we submit to the elder members of the profession, those not specially related to the schools, that they should move first and foremost whenever a movement is undertaken. And

Resolved, That we have no solicitude as to the bearing of pharmaceutical laws upon the interests of professional education in pharmacy, having nothing to ask in the matter of release of college graduates from State examinations and we would leave the consideration of the provisions of legislation to the care and responsibility of our more numerous associates among the practical pharmacists of Michigan.

By advocating, as alumni, measures which will necessarily bar some from entering the profession, although we try to place a barrier between the public and dangerous incompetence, we will be charged unjustly with interested motives, which will deprive our advocacy of much strength. Unjustly, because our alumni will always receive due recognition by the physician and the community, and will scarcely find their interests to be bettered by the enactment of laws which would tend to bring greater numbers of trained men into the profession. Our aims in this direction can only be for the benefit of the public, and, since it derives the benefit, from it should come the demand, to check charlatanry. It may be in the province of our association to draw the attention of the public to existing abuses, and to the dangers to which it is exposed through the agency of incompetent persons. It may be suggested, that perhaps it would be advisable to request a number of alumni to devote a portion of their time to the collection and examination of important drugs, obtained from various drug stores of the state.

DETECTION AND ESTIMATION OF ARSENIC IN BASIC CARBONATE AND SUBNITRATE OF BISMUTH

BY O. S. LEDMAN, PH. C., RIX'S MILLS, OHIO.

The method of analysis used in these samples, is the same as that described and used by R. H. Chittenden and S. W. Lambert (*American Chemical Journal*, Volume III, Number VI, page 396 *et seq*) with the use of only two chemicals, avoiding manipulations of extraction, etc., whereby arsenic in so minute quantities may be partially or wholly lost.

"There is no method for the detection of arsenic which promises better results, either qualitatively or quantitatively, for toxical purposes, than the decomposition of arsenuretted hydrogen by heat. Indeed, no other method allows of the accurate detection of such minute quantities as the method of Marsh if properly conducted.

In making use of this method as a test for arsenic in the usual manner, no particular precautions have been taken to have all of the arsenic deposited in the heated tube, and in the qualitative tests for which this method has hitherto been generally used it is well known that the gas is only partially decomposed, and thus it has come to be the general impression that arsenuretted hydrogen is only partially decomposed by heat."

"The explanation of many poor results which have been obtained by decomposing arsenuretted hydrogen, formed from a known quantity of arsenious oxide, by heat and weighing the metallic arsenic, is not at all difficult."—Chittenden and Donaldson, *American Chemical Journal*, Volume II, Number IV, page 238.

The cause of the whole trouble in most of these experiments with Marsh's apparatus "which is almost entirely mechanical, lies in the too rapid and irregular evolution of gas, the too rapid and irregular addition of the arsenical mixture, and the insufficient length of the heated tube."

"Gautier, in his recently described process for determining arsenic by the decomposition of arsenuretted hydrogen, has devised an improved arrangement for controlling the evolution of gas, by slowly introducing the arsenic mixed with a definite quantity of dilute sulphuric acid of known strength, later adding the same quantity of stronger acid and lastly a still stronger acid; the increasing strength of acid added counteracting the diluting effect of the reaction, so that the strength of acid remains about the same during the entire process of two and one-half to three hours in the determination of .005 grammes of arsenious oxide."—*American Chemical Journal*, Volume II, Number IV, page 239.

In making use of the Marsh apparatus according to Gautier's plan, it has been so modified at the suggestion of Professor S. W. Johnson that it now appears to combine all the essentials of a perfect apparatus.

A small flask, of about two hundred cubic centimeters, capacity is provided with a separating funnel of about fifty cubic centimeters capacity, provided with a glass stop-cock.

It will be readily seen that this is necessary to the slow and regular evolution of gas, a very important desideratum in the close recovery of arsenic, for with an open funnel, every time the arsenical mixture is introduced, there is a sudden rush of gas, with probably a small, but more or less appreciable loss. The advantage of the separating funnel is that it can be so arranged as to allow the mixture to drop into the generators slowly, as is desired.

The gas generated is dried by passing through a calcium chloride tube, thence through a tube of hard glass heated to a bright redness by a miniature furnace or a Bunsen lamp with a spread burner, and with a sufficient length of cooled tube, not a trace of arsenic goes by.

The part of the tube heated is wrapped with wire gauze or copper foil and supported at each end so as to keep the tube from sinking when heated. The furnace is provided with two side pieces of sheet metal so as to secure a steady flame.

"When the quantity of arsenic is very small, the tube is naturallv so placed that the mirror is deposited in the narrow portion, but when the arsenic is present to the extent of .005 grammes the tube should be six millimeters in inner diameter, and so arranged that fully two inches of this large tube are between the flame and the narrow portion. When the quantity of arsenic is less, the tube can naturally be smaller."

The acids of different strengths are prepared as follows:

Acid number one.—545 cubic centimeters pure concentrated H_2SO_4.
5,000 cubic centimeters H_2O.
Acid number two.—109 cubic centimeters pure concentrated H_2SO_4.
1,640 cubic centimeters acid number one.
Acid number three.—218 cubic centimeters pure concentrated H_2SO_4.
1,640 cubic centimeters acid number one.
Acid number four.—530 cubic centimeters pure concentrated H_2SO_4.
1,248 cubic centimeters H_2O.

Twenty to thirty grammes of granulated zinc previously alloyed with a small quantity of platinum were placed in the generator. A weighed quantity of bismuth was taken and mixed with a small quantity of water and about twenty cubic centimeters of dilute sulphuric acid (number two). When the basic nitrate of bismuth was taken, before mixing with the water and dilute acid, it was heated in a porcelain dish with a small quantity of pure concentrated sulphuric acid until the nitric acid was completely expelled.

Everything being in position the generator was filled with hydrogen by the use of a small quantity of acid number two. After sufficient time had elapsed for the air to be completely expelled, the gas was lighted and the tube heated to a bright redness.

The pastry mass of bismuth was then introduced into the generator by means of the separating funnel, the greater part of the bismuth being washed into the apparatus by the use of acids number three and four, frothing being prevented when necessary by the use of a few drops of sweet oil.

Each experiment lasted from two and one half to three hours.

Eleven samples of bismuth were analyzed with the following results:

Number.	Sub-carbonate taken.	Weight of As found.	Quantity of As in 100 grammes bismuth.	Quantity of As_2O_3 in 100 grammes bismuth.
1.	4.328 grammes	.0004 grammes	.00924grammes	.010988 grammes
2.	3.496 grammes	.0001 grammes	.00286grammes	.003400 grammes
3.	3.782 grammes	trace		
4.	3.9587 grammes	.0001 grammes	.00252grammes	.003030 grammes
5.	4.0845 grammes	trace		
6.	3.871 grammes	trace		
	Subnitrate taken.			
7.	4.260 grammes	trace		
8.	3.4638 grammes	.0003 grammes	.00866grammes	.010297 grammes
9.	3.4825 grammes	.0001 grammes	.00287grammes	.003414 grammes
10.	3.983 grammes	trace		
11.	4.1015 grammes	trace		

Average of the eleven determinations .002829 grammes.

Before any attempt at analysis was made, the zinc and sulphuric acid used were thoroughly tested for arsenic, and not a trace was found.

From an examination of the results obtained, it will be seen that not a single sample out of the eleven was entirely free from arsenic, but it was present in every one to a greater or less extent.

"The subnitrate of bismuth in particular is a medicine very extensively used, and though it may not contain arsenic in sufficient quantity to be in itself productive of harm, still the presence of such a poison in so common a medicine is greatly to be deplored, from the unjust conclusions and serious mistakes it is liable to cause."—*American Chemical Journal*, Volume III, Number VI, page 399.

THE ADULTERATIONS OF GROUND BLACK PEPPER.

BY GEORGE C. HALL, PH. C., KALAMAZOO, MICHIGAN.

In looking through the *Analyst*, and other chemical journals, which were conveniently at hand, I found but two cases recorded where pepper had been analyzed, and in both of these cases it was found to be adulterated. The first case was the prosecution of Mr. William Burnell, grocer, of Wooton Courtney, England, who was prosecuted for selling adulterated pepper as a pure article.

The pepper was analyzed, and was found to contain ten per cent. of bean starch.

When the case was tried, evidence was brought forward showing that the adulteration was not intentional, but was an accidental one.

It was found that the pepper in question had been ground in a mill in which beans had been ground just previous to grinding the pepper, and in this way bean starch was mixed with the pepper.

The second case was the analysis of six samples of pepper, by Mr. R. G. Frazer, Analyst for the Halifax Division, Canada.

Three of these samples were found to be pure; while the other three were found to contain mustard shucks, and bread; the adulteration in one case reaching as high as ninety per cent.

I made an examination of twenty-five samples, collected from the grocers, and druggists, of Kalamazoo, and Ann Arbor.

Of these twenty-five samples, five were collected from druggists, and twenty from grocers. Of the five samples collected from druggists, three were found to be pure, one to contain wheat starch, and the other to contain both wheat and buckwheat starches.

Of the twenty samples collected from grocers, two were found to be pure, nine to contain both wheat and buckwheat starches, six to contain wheat starch, two to contain wheat and bean starches, and one to contain buckwheat starch alone.

In the samples obtained from druggists the adulterations were found to be from five per cent. to ten per cent., while in those obtained from grocers, the per cent. of adulterations was from five per cent. to sixty per cent.

The samples obtained from druggists were all sold as first-class pepper, while of those obtained from grocers, eighteen were sold as first-class pepper, and two were second-class. From these figures it will be seen that wheat starch is the most abundant adulteration, buckwheat starch the second in amount, and bean starch the third, and smallest in amount used.

Following this is a tabular form, showing whether the samples are pure or adulterated, and if adulterated, what the per cent. of adulteration is. In this table, the percentages of adulterations are not supposed to be accurate, as the calculations were made by the eye only.

Number of Sample.	Whether Adulterated or Pure.	Per cent. of Adulterations.	What it was Adulterated With.
1.	Adulterated	Five per cent.	Wheat and bean starches.
2.	Adulterated	Twenty per cent.	Wheat starch.
3.	Adulterated	Twenty per cent.	Wheat and bean starches.
4.	Pure.		
5.	Adulterated	Five per cent.	Wheat starch.
6.	Pure.		
7.	Adulterated	Fifty per cent.	Buckwheat and wheat sta's.
8.	Adulterated	Thirty per cent.	Wheat starch.
9.	Adulterated	Ten per cent.	Buckwheat and wheat sta's.
10.	Adulterated	Twenty per cent.	Buckwheat and wheat sta's.
11.	Pure		
12.	Pure		
13.	Adulterated	Sixty per cent.	Buckwheat and wheat sta's.
14.	Adulterated	Ten per cent.	Buckwheat and wheat sta's.
15.	Adulterated	Fifty per cent.	Wheat starch.
16.	Pure		
17.	Adulterated	Fifteen per cent.	Wheat starch.
18.	Adulterated	Ten per cent.	Wheat starch.
19.	Adulterated	Five per cent.	Wheat starch.
20.	Adulterated	Ten per cent.	Buckwheat starch.
21.	Adulterated	Twenty per cent.	Buckwheat and wheat sta's.
22.	Adulterated	T'enty-five p'r c't.	Buckwheat and wheat sta's.
23.	Adulterated	Twenty per cent.	Buckwheat and wheat sta's.
24.	Adulterated	Five per cent.	Buckwheat and wheat sta's.
25.	Adulterated	Twenty per cent.	Buckwheat and wheat sta's.

TESTS OF PETROLEUM BURNING OILS.

BY GEORGE P. SOYER, PH. C., EAST SAGINAW, MICHIGAN.

My intention in this work was to test the heavier burning oils, but as I could not obtain samples of these, I was obliged to turn my attention toward the lighter oils in common use.

In the work I have taken the specific gravity, flashing and burning points and applied a chill test of 32° Fahrenheit.

The most important test for safety is the flashing point, and most of our states have very strict laws in regard to this. [*The Sanitary Engineer*, Volume IV and V, "Petroleum Legislation in the United States."] In my experiment I used the Michigan tester, removing the cover when testing for the burning point. [Report on "The Methods and Apparatus for Testing Inflammable Oils." State Board of Health of New York, No 45.] Of the samples I examined I find all but four stand the legal test.

The test for clear burning is the chill test, and at 32° Fahrenheit, an approximate idea of the amount of solids can be obtained. All the oils I examined were quite free from these. In making the test I placed the oil in eight-inch test tubes, and keeping it in a vessel with ice for from six to eight hours. I also tested five at 20° Fahrenheit and found that one gave a heavy precipitate, while the other two remained nearly clear.

Both Michigan and Ohio laws forbid the sale of oils whose flashing point is below 120° Fahrenheit.

The following is the result of my work:

Number.	Density, degrees Beaume.	Flashing point.	Burning point.	At 32°.	Where obtained.
1	45°	118°	133°	Turbid.	Cleveland.
2	45°	122°	147°	Turbid.	Cleveland Head Light oil.
3	32.5°	154°	212°	One-third solid.	Cleveland Signal oil.
4	46°	127°	146°	Clear.	Detroit.
5	44°	131°	149°	Milky precipitate.	Ann Arbor.
6	44°	120°	133°	Milky precipitate.	Ann Arbor.
7	46°	125°	144°	Clear.	Ann Arbor.
8	45°	123°	138°	Milky precipitate.	Canada, United States oil.
9	46°	119°	133°	Clear.	Canada, United States oil.
10	....	105°	117°	Slight precipitate.	Canada, United States oil.
11	45°	117°	135°	Milky precipitate.	Ann Arbor.
12	46°	125°	140°	Clear.	Ann Arbor.
13	45°	122°	142°	Milky precipitate.	Ann Arbor.
14	43.5°	120°	138°	Milky precipitate.	Ann Arbor.
15	44°	118°	133°	Milky precipitate.	Ann Arbor.
16	45°	120°	133°	Slight precipitate.	Ann Arbor.

DIFFUSION OF ARSENIC THROUGH THE BODY WHEN THROWN INTO MOUTH AND RECTUM AFTER DEATH.*

BY VICTOR C. VAUGHAN, M. D., AND JAMES H. DAWSON, PH. C.

[IN ABSTRACT.]

Within the past six months there has been tried in this state a murder case, in which the most important question which arose was whether or not arsenious oxide (common white arsenic) would diffuse through the body, after it had been

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*This article may be found in full in *The Journal of the American Medical Association*, Volume I, page 115.

mixed with water and injected into the mouth or rectum or both, after death. With the view of answering this question, which it seems has never before been studied experimentally, we have made the following experiments:

A large musk-rat, which had been caught by one of the students, was killed and about fifty grains (3.24 grammes) of arsenious oxide suspended in cold water was injected, with an ordinary bulb syringe with rectal tube attached, into the mouth and rectum. The rat was placed in a pine box and buried. After twenty-five days it was disinterred and the various organs removed and subjected to analysis with the results shown in the following table:

In this experiment we did not think to weigh the different organs.

Name of part Examined.	Amount of Arsenic calculated as As_2O_3, found.
Kidneys	.00095 grammes
Liver	.01082 grammes
Lungs	.19252 grammes
Stomach and contents	.00686 grammes
Large intestine	.40339 grammes
Small intestine	.10157 grammes
Heart	.02507 grammes
Brain	.03960 grammes
Total As_2O_3 recovered	.78078 grammes

It will be noticed that the lungs contained a much larger amount of arsenic than the stomach. Evidently the larger portion of that injected into the mouth passed down the trachea instead of going down the œsophagus. Indeed, the amount found in the liver is larger than that found found in the stomach. It is likely that the poison passed from the lungs into the liver.

The amount found in the brain is large; but in the musk-rat the bones of the skull are thin in texture and not firmly united.

In the second experiment a cadaver was used. The person had been dead between two and three days when the injection was made. An unweighed quantity of arsenious oxide was suspended in cold water, and this was injected, by means of a common bulb syringe with rectal tube, into the mouth and rectum. The body was laid away in a dry cellar for twenty-five days.

The various parts, as given in the table below, were then removed, weighed and sujected to analysis.

In dissecting the body it was observed that, although the cuticle had decomposed to a certain extent, the internal organs were firm to the touch and remained in a fair state of preservation. This was true of all the parts removed, except the brain, which was broken down to a semi-fluid condition.

The following table shows the part analyzed, its weight, the amount of arsenic, estimated as arsenious oxide, found, and the per cent. of arsenic found in the various tissues:

Name of part taken.	Weight of part.	Weight of As_2O_3.	Per cent. of A_2O_3.
Right kidney	104 grammes.	a distinct mirror.	
Left Kidney	90 grammes.	.00703	.00782
Liver	865 grammes.	.08316	.00961
Lower lobe of right lung	99 grammes.	.04333	.04376
Heart	370 grammes.	.02199	.00594
Transverse section of colon	85 grammes.	.02659	.03128
Rectum	22 grammes.	1.65000	7.50000
Spleen	48 grammes.	.00455	.00947
Stomach	300 grammes.	2.11200	.70400
Brain	1028 grammes.	.00363	.00035

It will be seen that while the right kidney contained only an unweighable quantity, the left kidney furnished nearly as large a per cent. of the arsenic as was furnished by the liver. We account for this by supposing that on the right side the liver caught up the greater portion of the arsenic passing down from the right lung; while on the left side the arsenic passed on more freely into the kidney. Contrary to what was observed in the experiments on the musk-rat, the stomach of the cadaver contained a large amount of arsenic, and it seems probable that some of the fluid thrown into the mouth passed directly into the stomach. We were surprised at finding the arsenic in the brain, and the query arises, by what avenue did the poison reach this organ? We noticed that while throwing the fluid into the mouth, at one time when the bulb of the syringe was very forcibly come pressed, a portion of the fluid returned through the nose. It is probable that some of the arsenic adhered to the roof of the pharynx and along the nasal passages, and from thence penetrated the brain.

It will be seen from these experiments that the arsenic was quite as widely diffused through the body as it would have been had it been administered during life and had it been the cause of death. These experiments also show that in a case of suspected arsenical poisoning, if arsenic has been introduced into the mouth and rectum in the manner above given, after death, the finding of the poison in the various organs mentioned in the table will be no proof that the poison was administered during life and caused death.

Now, embalming fluids containing arsenic are quite generally and indiscriminately used. They are used by the physician, by the undertaker and by others who prepare the body for burial. Some throw the fluid into the mouth or rectum or both; some puncture the abdominal walls with a trocar and then fill the cavity with the fluid; others simply bathe the body with some soluble form of arsenic or cover the body with cloths saturated with such a solution, others still inject a solution of arsenic into an artery. The most weighty argument yet urged against cremation is that it may be used as a means of covering up crime; but in a case of arsenical poisoning, the use of an arsenical embalming fluid may be employed as a more certain method of covering up the crime than the incineration of the body would be. On the other hand as long as the present frequent use of these embalming fluids continues, some innocent person may be accused of committing murder by arsenical poisoning, and arsenic being found in the body, may suffer an unjust sentence.

Dr. Kedzie, of the Michigan Agricultural College, working altogether independently of us, has made an experiment on a cat similar to that on the musk-rat, detailed in this paper, with similar results.

COMPARISON OF SOME FLUID EXTRACTS PREPARED BY THE WATER BATH PROCESS WITH FLUID EXTRACTS OF SAME DRUGS PREPARED BY THE UNITED STATES PROCESS.

BY F. T. BABBITT, PH. C., CORRY, PENNSYLVANIA.

I prepared fluid extracts of Aconite, Belladonna, Ergot, Guarana and Valerian by the following formulæ, which constitute the Water Bath Process:

FLUID EXTRACT ACONITE ROOT.

Aconitum Napellus.—Nerve sedative, narcotic.—Dose: one-fourth to two drops. Take of Aconite Root in fine powder, sixteen troy ounces. Alcohol, sufficient.

Moisten the drug with six ounces of alcohol and pack firmly in the water bath percolator. Pour upon it ten ounces of alcohol, and set in a warm place for four days; then heat very moderately, and after two hours begin percolating, adding alcohol to the drug in portions of four ounces, and continuing the heat and percolation until twelve ounces have passed. Set this aside, turn off the heat, and continue the percolation until sixteen ounces more have passed. Distill off twelve ounces of alcohol from this last portion, and add the four ounces of extract remaining to the twelve ounces first reserved to make one pint of the Fluid Extract.

When the percolation is completed, remove the cover from the percolator and adjust the still top, heat to boiling and distill off what alcohol remains in the drug in the percolator. This may be added to the alcohol distilled from the sixteen ounces, and used for making Tincture of Aconite, or any of the aconite preparations, but should not be used for other purposes, except liniments, etc., for external use.

FLUID EXTRACT BELLADONNA ROOT.

Atropa Belladonna. Deadly Nightshade.—Sedative, narcotic, poison. Dose: One to five minims. Take of Belladonna Root in moderately fine powder, sixteen troy ounces. Alcohol, sixteen fluid ounces. Water, sufficient.

Moisten the drug with six ounces of the alcohol, and pack firmly in the water bath percolator. Pour upon it the remainder of the alcohol and set in a warm place two days; then heat very moderately, and after one hour begin the percolation, adding water to the drug after the alcohol has all disappeared from the top, and continuing the heat until one pint of the extract has been obtained.

FLUID EXTRACT ERGOT.

Ergota. Spurred Rye. Smut Rye.—Narcotic, styptic, ecbolic. Dose: Twenty to sixty minims. Take of Ergot, in fine powder, sixteen troy ounces. Alcohol, four fluid ounces. Diluted Alcohol, ten fluid ounces. Water, sufficient.

Moisten the drug with the alcohol, and pack firmly in the water bath percolator. Pour the diluted alcohol upon it and set in a warm place for two days. Then heat very moderately, and after one hour begin to percolate, adding water to the drug, and continuing the heat until a pint of the fluid extract is obtained.

The Ergot from which the extract is prepared should be as fresh as possible to insure reliability of the preparation.

FLUID EXTRACT GUARANA.

Paullinia Sorbilis.—Remedy for Sick Headache, etc. Dose: Ten to sixty minims. Take of Guarana, in moderately fine powder, sixteen troy ounces. Alcohol, ten fluid ounces. Water, sufficient.

Moisten the drug with six ounces of the alcohol, and pack firmly in the water bath percolator. Mix the remaining four ounces of alcohol with six ounces of water, and pour upon the drug. Set in a warm place for two days; then heat moderately, and after one hour begin to percolate, adding water to the drug and continuing the heat until fourteen ounces have passed, which reserve. Continue the percolation with water until twelve ounces more have passed, which evaporate to two ounces, and add to the fourteen ounces first reserved to make a pint of the fluid extract.

FLUID EXTRACT VALERIAN.

Valeriana Officinalis.—Tonic, nervine, anti-spasmodic. Dose: One-half to one fluid drachm. Take of Valerian root, in moderately fine powder, sixteen troy ounces. Alcohol, twelve fluid ounces. Water, sufficient.

Moisten the drug with six ounces of the alcohol, and pack firmly in the water bath percolator. Mix the remaining six ounces of alcohol with four ounces of water, and pour upon the drug. Set in a warm place for two days; then heat moderately, and after one hour begin to percolate, adding water to the drug and continuing the heat until a pint of the fluid extract is obtained.

The extracts thus prepared were compared with the extracts of the same drugs, made by the United States Pharmacopœia Process, with results as shown in the following table:

	U. S. P.			W. B. P.		
	Per Cent. of Alkaloid.	Per Cent. of Total Solids.	Per Cent. of Alcohol.	Per Cent. of Alkaloid.	Per Cent. of Total Solids.	Per Cent. of Alcohol.
Fluid Extract Belladonna......	.845		74.55	.839		46.14
Fluid Extract Aconite..........	.608		65.57	1.009		67.85
Fluid Extract Guarana.........	2.42		50.72	1.67		22.55
Fluid Extract Ergot.............		16.85	31.15		17.71	28.77
Fluid Extract Valerian..........		11.32	44.30		12.75	30.22

It will be seen from the above table that while the per cents. of the alkaloid by the two processes from belladonna are substantially the same, the per cent. of alcohol is much less by the Water Bath Process. For the aconite the per cent. of alkaloid is much greater, and the per cent. of alcohol substantially the same by the Water Bath Process as by the United States Pharmacopœia Process. For guarana the alkaloid and alcohol are both much less by the Water Bath Process. For the ergot and valerian there is a slight increase in the alkaloids and a marked decrease in the amount of alcohol.

DETERMINATION OF THE FREE AND COMBINED OXALIC ACID FOUND IN PIE-PLANT.

BY B. W. DAMON, PH. C., WILLOUGHBY, OHIO.

[IN ABSTRACT.]

The purpose of my work was the estimation of the amount of free oxalic acid and of that combined with calcium in pie-plant. It is known that this substance contains sufficient oxalic acid to cause the appearance of crystals of oxalate of lime in the urine of those who have partaken of the plant.

I found the fresh stalks to contain the following amounts: Free oxalic acid, 0.11 per cent. Oxalic acid combined with calcium, 0.08 per cent. Total oxalic acid, 0.19 per cent.

THE STRENGTH AND PURITY OF BICARBONATE OF POTASSIUM.

BY EVAN J. ROMANS, PH. C., QUAKER CITY, OHIO.

Bicarbonate of potassium represents forty-seven per cent. K_2O, forty-four per cent. CO_2 and nine per cent. of H_2O. Saleratus was the name formerly given to it as it was used in cookery, but the bicarbonate of sodium is now used instead and also goes under the name of saleratus. Bicarbonate of potassium is prepared from the carbonate by dissolving the carbonate in distilled water and passing carbonic acid gas through the solution until it is fully saturated. Then filter the liquid and evaporate so that crystals may form, taking care that the heat does not exceed 160° Fahrenheit. Lastly, pour off the supernatant liquid and dry the crystals on bibulous paper. Carbonic acid gas may be obtained from marble by the addition of dilute sulphuric acid. The complete saturation of the solution with carbonic acid gas is conveniently ascertained by means of a solution of sulphate of magnesia, which yields no precipitate in the cold with bicarbonate, but a white one with carbonate of potassium. Bicarbonate of potassium is liable to contain other bases, as soda, etc. Chlorides and sulphates are common impurities. One of the most common impurities is the normal carbonate, due either to a loss of carbonic acid, or to insufficient charging in the manufacture, thereby giving an excess of alkali and a corresponding deficiency of carbonic acid. In the following analysis no attempt was made to test or estimate other impurities than chlorides and sulphates. The Pharmacopœa of 1880 gives the following tests and limits. When supersaturated with nitric acid the aqueous solution should yield no precipitate with test solution of chloride of barium (absence of sulphates) and at most only a slight cloudiness with test solution of nitrate of silver (limit of chloride).

Chlorides are very hard to get rid of in the manufacture of bicarbonate of potassium and very few samples, as found in the shops, are free from it even to the limit of the United States Pharmacopœa.

In the samples analyzed the alkali was estimated volumetrically by adding an excess of standard solution of sulphuric acid, boiling and titrating back with standard solution of potassium hydrate. In each case two titrations were made.

The carbonic acid was estimated by loss of weight by means of the twin bottles described in Fresenius' quantitative chemical analysis. In *Proceedings American Pharmaceutical Association*, Volume XIX, page 524, can be found a series of analyses of the different bicarbonates made by Dr. Squibb, in which he used the twin bottles with accurate results.

The chlorides and sulphates were estimated gravametrically as silver chloride and barium sulphate. Of the samples analyzed, eight in all, four were procured directly from the manufacturer and the remaining four from shops in Ann Arbor. Seven of the samples were clear crystals and one, that of Schuchhardt, was in the powered form. They were all found to have more or less deficiency of carbonic acid and a corresponding increase of alkali.

Chlorides were found in seven samples and sulphates were found in two. Below is a tabular statement of analysis made.

Samples. KHC.O$_3$	KO. 47.	CO$_2$ 44.	Sulphates.	Chlorides.
Rosengarten & Sons..........	53.21	33.95	None	1.12
Larkin & Scheffer..............	56.44	32.14	None	0.42
Mallinc Krodt & Co...........	52.04	36.87	None	0.73
Powers and Weightman.....	52.96	34.30	0.39	1.22
Chas. Pfizer & Co...............	54.26	32.87	None	1.02
Schuchhardt........................	59.39	28.60	None	None
Farrand and Williams.......	53.85	37.04	None	1.19
Swift and Dodds...............	55.13	29.20	0.42	1.98

SOLUBILITY OF THE TASTELESS TANNATE OF QUININE IN THE GASTRIC JUICE.

BY E. C. FIELD, PH. C., BATTLE CREEK, MICHIGAN.

The object of the experiments set forth in this paper was to ascertain the solubility of the tasteless tannate of quinine in the gastric juice, and to form some estimate of its value in medicine as compared with the sulphate. The subject was suggested by Dr. V. C. Vaughan who appreciated the value of a tasteless quinine, but was suspicious of its solubility.

In the first place there is a difference between the tasteless tannate and the ordinary tannate, obtained by simply precipitating the sulphate dissolved in dilute sulphuric acid. The latter is probably not the pure tannate of quinine, but contains traces of the sulphate. At any rate, it has a bitter taste, and as the only object in using the salt at all, is to get rid of the bitter taste, we have to deal only with the tasteless tannate of quinine. This is made in the same general way, but with several precautions, and in order to obtain a good sample considerable care is required in the manipulations.

There are several formulæ for making this salt; and should any one care to experiment with it, they will find in the *American Journal of Pharmacy* for February, 1883, page 100, a formula taken from the *Zeitschn. Oester. Apoth. Ver.* for 1882, page 431, by which ten parts of the sulphate yield from thirty to thirty-three parts of the tasteless tannate. Also another by A. Berick may be found in the same journal, taken from a German source. (*The Phar. Zeitung* Number XXX.) Prepared by this process, ten parts of the sulphate yield thirty-five parts of the tasteless tannate.

The process by which the salt used in these experiments was made is found in the "*Handbuch Der Pharmaceutischen Praxis*, Volume II, page 1,331, and gives a yield of forty parts of the tasteless tannate from ten parts of the sulphate. So much for the tasteless tannate. Now as to the solvents used.

In the experiments one, two, three and four was used a two-tenths per cent. solution of hydrochloric acid (HCl); representing the acidity of the gastric juice.

The solvent used in five and six was an artificial gastric juice, made by dissolving in two hundred cubic céntimeters of a two-tenths per cent hydrochloric acid (H Cl) solution, sixty-four grains, or 4.147 grammes, of pepsin, making a solution warranted by the manufacturers of the pepsin to dissolve seven hundred and sixty-eight grains, or 49.772 grammes, of freshly coagulated albumen; but which on experiment was found to dissolve only about one-twelfth of that amount, namely, sixty-four grains on 4.147 gammes. In experiments seven and eight, the solvent was real gastric juice obtained from a dog by means of a canula. The dog had worn the canula for about six months but seemed perfectly healthy and active.

EXPERIMENT NUMBER I.

Amount of two-tenths per cent. HCl solution used=fifty cubic centimeters; weight of tannate of quinine taken=grammes 0.400; weight of tannate of quinine dissolved=grammes 0.251; weight of tannate of quinine residue=grammes 0.149. Digested for one-half hour at 98° Fahrenheit in a small beaker about one and one-quarter inches in diameter, without agitation.

NUMBER II.

Amount of two-tenths per cent. HCl solution used=fifty cubic centimeters; weight of tannate of quinine taken=grammes 0.6315; weight of tannate of quinine dissolved=0.3793; residue =grammes 0.2522. Digested one-half hour at 98° Fahrenheit in same beaker and with agitation.

NUMBER III

Amount of two-tenths HCl solution used=100 cubic centimeters; weight of tannate of quinine taken=grammes 0.670; weight of tannate of quinine dissolved=grammes, 0.535; residue=grammes 0.135. Digested one hour at 98° Fahrenheit in a nearly closed flask with a bottom two and one-half inches in diameter and without agitation.

NUMBER IV.

Amount of two-tenths per cent. H Cl solution used=200 cubic centimeters; weight tannate of quinine taken=grammes 2.391; weight tannate of quinine dissolved=grammes 2.201: residue, grammes 0.190. Digested one hour at 98° Fahrenheit in a beaker three inches in diameter and with thorough agitation.

NUMBER V.

Amount of pepsin solution used=50 cubic centimeters; weight tannate of quinine taken=grammes 0.3440; weight tannate of quinine dissolved=grammes 0.2547; residue=grammes 0.893. Digested one hour at 98° Fahrenheit in the small one and one-quarter inch beaker and without agitation.

NUMBER VI.

Amount of pepsin solution used=50 cubic centimeters; weight of the tannate of quinine taken=grammes 0.514; weight of the tannate of quinine dissolved=grammes 0.352; residue= grammes 0.162. Digested one-half hour at 98° Fahrenheit in the small one and one-quarter inch beaker with thorough agitation.

NUMBER VII.

Amount of dog gastric juice used=25 cubic centimeters; weight tannate of quinine taken=grammes 0.3080; weight tannate of quinine dissolved=grammes 0.0575; residue=grammes 0.2505. Digested one-half hour at 98° Fahrenheit in small one and one-quarter inch beaker without agitation.

NUMBER VIII.

Amount of dog gastric juice used=25 cubic centimeters; weight tannate of quinine taken=grammes 0.2830; weight tannate of quinine dissolved=grammes 0.0707; residue—grammes 0.2123. Digested one-half hour at 98° Fahrenheit in small one and one-quarter inch beaker with thorough agitation.

Attention is called to the size of the dishes in which the experiments were made, for the reason that in a small dish the tannate tends to form an adhesive gummy mass and does not dissolve as readily as when spread over a larger surface.

Each sample of the salt used, and the residue was dried in an air bath at 60° Centigrade for one-half hour; the residue having been first washed with a small quantity of water and drained apparently dry.

Another and still more practical experiment was made by giving ten grains of the tannate to each of two healthy men. One took his dose at 5:30 P. M., half an hour before supper and felt none of the physiological effects of the sulphate which had been taken before and had always produced more or less of the head symptoms peculiar to the sulphate of quinine. The other gentleman took his dose of ten grains at 10:30 A. M. and also reported no effect; but next day in the afternoon he was taken sick at the stomach on account of eating something that didn't agree with him and vomited up some of the tannate taken twenty-eight or thirty hours before.

From all these experiments it seems clearly proven that the tasteless tannate of quinine as a medicine is nearly and practically inert and even if a strong digestive juice should be able to dissolve a minimum dose of eight grains, corresponding to two grains of the sulphate, the individual for whom the juice acted would receive the effect of about six grains of tannin, which might be the last effect desired.

Kind and Amount of Solvent.	Amount of Tannate Taken.	Amount of Tannate Dissolved.	Time Digested.	Regards Agitation.	Size of Beaker.
Acid sol. 50 c. c.	gm. 0.4000	gm. 0.2510	½ hour	without	1¼ inch.
Acid sol. 50 c. c.	gm. 0.6315	gm. 0.3793	½ hour	with	1¼ inch.
Acid sol. 50 c. c.	gm. 0.3350	gm. 0.2675	1 hour	without	2½ inch.
Acid sol. 50 c. c.	gm 0.5977	gm. 0.5502	1 hour	with	3 inch.
Pepsin 50 c. c.	gm. 0.3440	gm. 0.2547	1 hour	without	1¼ inch.
Pepsin 50 c. c.	gm. 0.5140	gm. 0.3520	½ hour	with	1¼ inch.
Dogjuice 50 c c	gm. 0.6160	gm. 0.1150	½ hour	without	1¼ inch.
Dogjuice 50 c c	gm. 0.5660	gm. 0.1414	½ hour	with	1¼ inch.

The above is a condensed table of comparison in which the amounts are changed so as to correspond to the fifty cubic centimeters of solvent used in each case. Digested at 98° Fahrenheit.

EXAMINATION OF ACETIC ACID AND VINEGAR FOR ADULTERATIONS.

BY SAMUEL W. ADLER, PH. C., FORT SMITH, ARKANSAS.

I.—ACETIC ACID.

Acetic acid exists ready formed in certain plants, and is a frequent product in chemical reactions. It is produced by the acetic fermentation of sugar, and by the limited oxidation of alcohol.

In commerce the largest quantity is obtained from the products, in the distillation of wood and is called pyroligneous acid. This is neutralized with lime and the resultant salt distilled with sulphuric or hydrochloric acid.

Pure acetic acid is a colorless, crystalline solid known in commerce as "Glacial acetic acid," has its melting point at 16.7° Centigrade and boils at 119° Centigrade, and may be distilled unchanged. It is miscible with all proportions of water, alcohol and ether, and dissolves many essential oils, camphors, resins and metallic salts insoluble in water.

Addition of water causes evolution of heat and a contraction in volume till about twenty per cent. of water has been added when a hydrate is formed (composition $C_2H_4O_2H_2O$).

Acid of this strength has a higher density than the glacial, so that either dilution or concentration causes a diminution of gravity.

This is the reason why density should never be relied upon for determination of acetic acid.

Commercial acetic acid is liable to contain:

(1) Sulphuric acid and sulphates.
(2) Sulphurous acid and sulphites.
(3) Hydrochloric acid and chlorides.
(4) Copper and lead.
(5) Calcium salts.
(6) Empyreumatic and indefinite organic bodies.
(7) General fixed impurities.

These may be detected and estimated by scheme in *Allen's Commercial organic analysis*, Volume I. pages 192, 193, 194.

The United States Pharmacopœial requirements for strength and purity are:

(1) Acetic acid should not yield a precipitate with hydrosulphuric acid (absence of copper, lead or tin).

(2) Or when supersaturated with ammonia hydrate (iron).

(3) Or with test solution of ammonium oxalate (calcium).

(4) No residue should be left on evaporating an alkaline solution to dryness (other acids and fixed impurities).

(5) When supersaturated with test solution of potassa, should not have a smoky odor or taste.

(6) When diluted with five volumes of distilled water, the color caused by the addition of a few drops of test solution of potassium permanganate should not be sensibly changed on standing five minutes at ordinary temperature (empyreumatic substances).

(7) Boiled with an equal volume of sulphuric acid the liquid should not be darkened (organic matter).

(8) On adding a crystal of ferrous sulphate, to a cooled mixture of equal volume of acetic and sulphuric acids, no reddish brown zone should make its appearance around the crystal. (nitric acid).

(9) No precipitate should be formed on addition of a few drops of test solution of barium chloride (sulphuric acid).

(10) Nor by adding to another portion a test solution of silver nitrate (hydrochloric acid).

(11) Nor after the last named addition should the mixture turn dark on being warmed (sulphurous acid).

By scheme just mentioned I analyzed nine samples as follows:

Samples		per cent acid.	H_2SO_4.	Metals.	$KMnO_4$ reduces in.	Fixed inorganic matter mg. per liter.
1.	C. P.	43.6				120
2.	8.	42.4			6 min.	85
3.	8.	39.3		very slight.	4 min.	225
4.	glacial.	84				hardly an appreciable quantity.
5.	C. P.	49.8				160
6.	U. S. P.	33	very slight.	slight.	3 min.	240
7.	glacial.	91				
8.		40.6		slight.	3 min.	210
9.	8.	44		slight.	4 min.	115

II.—VINEGAR.

Commercial vinegar is a more or less impure acetic acid, containing usually acetic acid, acetic ether, alcohol, sugar, gums, and a variable amount of salts.

The chief varieties are:

(1) Malt vinegar, made from acetic fermentation of a mixture of malt and barley.

(2) Wine venegar, prepared from grape juice and inferior wines.

(3) Glucose vinegar.

(4) Beer vinegar, from sour ale.

(5) Cider vinegar, from apples and pears.

(6) Crab vinegar, from crab apples.

(7) Various artificial vinegars.

The chief adulterations are:

(1) Water.

(2) Mineral acids, especially sulphuric, rarely hydrochloric and still more rarely nitric.

(3) Metallic adulterations, such as arsenic (derived from sulphuric acid) copper, lead, zinc and tin, from action of acid on any metallic surface with which it may have come in contact.

(4) Pyroligneous acid.

(5) Various organic substances such as coloring agents and capsicum.

Vinegar should contain at least three per cent. of acetic acid, if not it may safely be returned as adulterated with water. (A. W. Blythe, page 476). Per cent. of acetic acid may be estimated first by titrating total acids present, then estimating per cent. of free mineral acids and deducting same from total; difference equals acetic acid.

Second, may be estimated by distilling one-hundred and ten cubic centimeters until one-hundred cubic centimeters have been drawn over, this is ten elevenths. The one-hundred cubic centimeters will contain eighty per cent. of whole acetic acid present in the one hundred and ten cubic centimeters and may be titrated. It will be necessary to test distillate for H Cl (A. W. Blythe, Foods, Composition and Analysis, page 476).

(1) Hydrochloric acid is detected by test solution of silver nitrate.

(2) Nitric acid may be detected by brown ring or (in absence of reducing agents) by rapid decoloration of solution of indigo-carmine.

(3) Sulphuric acid and sulphates by barium chloride; free sulphuric acid may be separated from sulphates by evaporating the vinegar to a syrup and precipitating the sulphates with alcohol, filtering, wash precipitated salts with alcohol, and estimate free sulphuric acid in alcoholic solution. This result deducted from total sulphates equals per cent. of sulphates in vinegar.

(3) Metallic adulterations may be detected by saturing the liquid with hydrosulphuric acid and testing resulting precipitate for arsenic, copper, zinc, tin, and lead.

(4) Pyroligneous acid is revealed by excess of sulphate and acetate of sodium.

(5) The chief organic adulteration is capsicum.

The following is the result of analysis of a few samples:

Samples.	H_2SO_4	H Cl	Metals.	Per cent. of acid.
Number 1				4.3 per cent.
Number 2	traces.		traces.	3.5 per cent.
Number 3	traces.	traces.	traces.	6.7 per cent.
Number 4			traces.	4. per cent.
Number 5	traces.			3.2 per cent.

It will be seen from this that the vinegars examined were not intentionally adulterated.

EXAMINATION OF CANNED FRUITS AND VEGETABLES FOR SALICYLIC ACID.

BY J. D. DENNY, PH. C., LANCASTER, NEW YORK.

It being known that salicylic acid is used in foreign countries to a considerable extent, as a preservative agent in articles of food, and that the quantity used frequently exceeds the amount allowed by law, it was suggested to me as quite probable that such a device had been resorted to in this country. Therefore, as a matter of sanitary interest and importance, I took for my thesis work the above named subject.

The extent and results of my investigation are as follows. I examined twelve samples of different canned fruits; but contrary to expectation I found them all to be free from salicylic acid. The following tabular form shows the kind of fruit, where canned, etc.

Fruit examined.	Put up by.	Locality.	Amount Examined.	Acid found.
Tomatoes............	J. S. Seary,	Kent Co. Md.	1 quart	none
Pie Peaches........	A. Fischer & Co.,		1 quart	none
Pine Apples........	D. D. Mallory & Co.,	Baltimore, Md.	½ quart	none
Apricots..............	J. Lusk Canning Co.,	Oakland, Cal.	1 quart	none
Golden Pumpkin.	Lambic, Corbin & Chittenden,	Adrian, Mich.	1 quart	none
Strawberries.......	East Aurora Pres. Co.	New York.	½ quart	none
Bartlet Pears......	Capital Pkg. Co.	Sacramento, Cal.	1 quart	none
Green Gages.......	Capital Pkg. Co.	Sacramento, Cal.	1 quart	none
Apples....	C.A.Rutledge&Bros.	Baltimore Co. Md.	1 quart	none
Egg Plums..........	J. Lusk Canning Co.	Oakland, Cal.	1 quart	none
Strawberries.......	E. Aurora Pres. Co	East Aurora, N. Y.	½ quart	none
Corn.................	Burnham & Morrill.	Portland, Maine.	½ quart	none

The plan of my work is as follows: Place the contents of the can in a coarse cloth strainer and express the juice; to the expressed mass, add a little distilled water and heat nearly to boiling and express again. Filter the expressed liquids through glass wool, or some other finely divded substance, and wash the residue with a little warm water. Now measure the amount of liquid obtained and to fifty cubic centimeters of it, add five or more cubic centimeters of amylic alcohol and shake the solution. The amylic alcohol extracts the salicylic acid and after standing, will rise to the top and is drawn off into a test tube and an equal volume of ethylic alcohol added, in which it dissolves. To this add a solution of ferric chloride, when if salicylic acid were present in the fruit, a dark violet color immediately appears. To insure the removal of all the salicylic acid, the juice should be extracted with another, or repeated, portions of amylic alcohol, until a few drops of the amylic alcohol solution dissolved in ethylic alcohol give no reaction with ferric chloride.

To make an exact quantitative estimation of salicylic acid is somewhat difficult; however, having experimented with it by adding known amounts of the acid to different fruit juices, I find that something near the added amount can be recovered. My plan of work is as follows: Take 0.003 grams of salicylic acid and place in a test tube of one-hundred cubic centimeters capacity and dissolve in fifty cubic centimeters of water with aid of heat; to this add, drop by drop, from a burette, a weak solution of ferric chloride (the ordinary reagent diluted with about one hundred parts of water) until the last drop ceases to increase the depth of color in the salicylic acid; and note the number of drops used. This solution is taken as a standard of comparison. Having extracted all the salicylic acid from the fruit juice, and dissolved it in ethylic alcohol, we now place it in a test tube of the same size as that in which the standard solution is placed, and add to it, drop by drop, ferric chloride of the same strength as that used in the standard solution, until no deeper color is made by the last drop; and note the amount used. Now to get this salicylate of iron into a water solution so that it will compare with the standard, add water to it in the amylic alcohol solution until it reaches the fifty cubic centimeter mark in the test tube, which throws the amylic alcohol out of solution, and it rises above the fifty cubic centimeter mark in the tube and we have the salicylate in the water solution. From these results we can estimate the amount of salicylic acid, by the following proportions.

Number drops of ferric chloride required for the 0.003 gram acid taken: the 0.003 gram:: Number drops ferric chloride required for the unknown: ×=Number grams acid in the fifty cubic centimeters examined. From this, calculate the amount of salicylic acid in the whole of the liquid obtained from the fruit, as follows: Fifty: value of × in the above proportion:: Cubic centimeters total liquid: ×=the amount of acid in the fruit examined. By the above method of extracting the salicylic acid, I was able to recover good tests for the acid after adding it to the various fruit juices in very small amounts.

The *American Journal of Pharmacy* for 1882, page 443, contains an article which sets forth a so-called "reliable method" for detection of salicylic acid in foods; which depends upon the volatility of salicylic acid with aqueous vapor. This method I tested quite thoroughly and find that it can not be relied upon for detection and much less for estimation of the acid, when the liquid under examination, contains no greater amount than in proportion of 0.15 gram to the liter, which is the amount allowed by law in Great Britian. When adding the acid to pure water in this proportion and distilling with Liebig's condenser, I could get no trace of salicylic acid in the distillate until the solution in the retort was evaporated nearly to dryness, when a faint trace would be obtained, but the solution would evaporate to dryness before getting anything *but* a trace; and when adding salicylic acid to fruit juices and distilling in the same manner, I could get no trace at all of salicylic acid in the distillate.

References with bearings upon this subject are found in *American Journal of Pharmacy*, Volume LII. page 375, *Chemical News*, 1882, Volume XLVI, page 243, *New Remedies*, 1883, Volume, XII, page 85.

QUANTITATIVE ESTIMATION OF DEXTRINE AND STARCH IN BARLEY, AND OF DEXTRINE, MALTOSE AND STARCH IN MALT.

BY RICHARD F. OBERMANN, PH C., MILWAUKEE, WISCONSIN.

A fair sample of barley was fully dried at 100° to 120° Centigrade, ground very fine in a mortar, (preferred to a mill, because causing less loss, and giving a finer powder) and passed as far as possible through a sieve of about sixteen meshes to the inch. A weighed sample of thirty grams of the well-mixed powder was selected, placed on a filter, in a funnel, and washed with cold water (distilled water of common temperature will do), until a little of the filtrate gave no turbidity with an equal bulk of stronger alcohol (absence of dextrine).

This test with alcohol was preferred, as the trace of dextrine precipitated can be added to the original filtrate again, whereas the test with the reagent to be used in estimation would spoil so much as it precipitated. Water at this temperature does not dissolve any starch, as can be proven by adding a little iodine solution to any part of the filtrate, but only dissolves all of the dextrine and some albuminous substances, which are mostly coagulated on evaporation, and do not interfere with the precipitation of dextrine.

The sample of barley was washed on the filter for about two afternoons. The filtrate was evaporated with frequent stirring, to about three hundred cubic centimeters, and to remove any coagulated albumen or solid matter, it was filtered while hot. While at a high temperature, about half an ounce of dextrin-reagent was added to precipitate all the dextrin. It was then filtered, hot, through two filters previously trimmed, after drying, to an equal weight, and the precipitate was washed with hot water, from which previously all carbon dioxide had been removed by boiling. The washing was continued until there was no residue left by evaporating a portion of the filtrate to dryness. The filtrate and washing were saved, and the precipitate dried on the filter and weighed.

Thirty-five per cent. of this weight is the dextrine. The dextrine-reagent is a special solution of subacetate of lead, as described by Dr. Lipps.* Lithrage was added to a saturated solution of lead acetate and the mixture heated to about 55° Centigrade, when it thickens owing no doubt to the formation of some of the extremely basic lead compounds. Dissolving the soluble basic acetate of lead with water and the filtered solution kept in a well stoppered bottle. Half an ounce of lead acetate was heated gradually, without adding water, to dissolve in its own water of crystalization. Lithrage was then added

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*E. WALLER, Laboratory Notes, *Journal American Chemical Society*, 1882, page 212; *New Remedies*, 1883, page 85.

gradually, about one-fourth ounce in all. When cooled, distilled water, from which all the carbon dioxide had been removed by boiling, was added. To prevent carbonization from the air, the dextrine solution was kept continually hot, the precipitate was washed with water free of carbon dioxide. The prepared basic acetate of lead was made up to about two ounces, filtered, and kept in a well stoppered bottle. The compound with dextrine is probably not a strict chemical union, but, according to Dr. Lipps, it is nearly $PbOC_6H_{10}O_5$, and one hundred parts when thoroughly dried represent thirty-five per cent. of dextrine. The same compound is formed by the ammonio-lead acetate, but as this latter compound is very unstable, and most ammonia contains more or less carbon dioxide, the former reagent was preferred.

While washing the dextrine from the barley, some portion of it is believed to change to glucose, though others think that barley contains some sugar. To estimate the quantity of this sugar, all the washings and the filtrate from the dextrine precipitate are to be saved and evaporated to one hundred cubic centimeters. Graduated Fehling's solution is to be added from a burette, until the reduction, if any occurs, is completed. The final reaction can be noticed by taking a small filtered portion, adding a drop of acetic acid and a drop of potassium ferrocyanide solution. A reddish-brown precipitate shows excess of the copper solution.*

In this case 1.2 cubic centimeters of Fehling's solution were needed for the filtrate and washings, an indication of 0.006 gramme of sugar in the solution. With the view that this sugar derived from dextrine during the operation, it was, in this case, calculated into dextrine—only 0.0054 grammes. The dextrine of the precipitate amounted to 1.6159 grammes, making 1.621 grammes in all, from the thirty grammes of barley, or 5.4 per cent.

Estimation of the Amount of Starch in Barley: The washed residue in the filter out of which the dextrine had been dissolved, was placed in a porcelain dish, and boiled with two cubic centimeters sulphuric acid previously diluted with about five hundred cubic centimeters of water. The weight of the absolute sulphuric acid is to be about ten per cent. of the weight of starch to be converted. The mixture was boiled for seven to ten hours, and until there was no reaction for starch with iodine, the volume being kept at five hundred cubic centimeters, by adding water from time to time. After all the starch was converted, the material was filtered and washed, until the washings gave no test for sugar. The filtrate was further boiled from five to six hours, until the absence of dextrine was shown, by adding to a small portion an equal bulk of stronger alcohol. The sulphuric acid was then wholly neutral-

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*Moritz, 1883: *Zeit. Anal. Chem.* XXII, 43.

ized with barium carbonate, and the precipitate filtered and washed until the washings with Fehling's solution gave no reaction for sugar. The solution was evaporated to bring it to five hundred cubic centimeters, and the glucose estimated with Fehling's solution, fixing the end reaction as before mentioned. Of the five hundred cubic centimeters, 2.3 cubic centimeters were required for twenty cubic centimeters of Fehling's solution, therefore the result indicated 21.7 of glucose in the five hundred cubic centimeters of solution or 19.53 grammes of starch in the thirty grammes of barley, a proportion of 65.16 per cent.

Estimation of Dextrine, Maltose, and Starch, in a Sample of Malt: Of malt, powdered in a mortar, to pass through a sieve of sixteen meshes to the inch, then dried at 100° Centigrade to a constant weight, thirty grammes were taken (avoiding exposure to the air before weighing as the dried powder is deliquescent). The powder was washed on a filter with cold distilled water, for about six hours, and until the washings gave no reaction for sugar with Fehling's solution, or for dextrine with strong alcohol. The total filtrate is to be concentrated to about three hundred cubic centimeters, and, if not clear, filtered. To the solution, while hot, about half an ounce of the dextrine-reagent, was added, and the mixture filtered, hot, through two filters of equal weight. The precipitate was washed with hot water previously boiled, dried, and weighed, with counterpoise of the outer filter. The weight was 3.48 grammes. Taking thirty-five per cent, we have 1.218 grammes of dextrine, from the thirty grammes of malt, or 4.06 per cent.

The filtrate and washings, from the dextrine precipitate were evaporated together to about three hundred cubic centimeters, filtered, the filter washed, and the volume of solution made up to five hundred cubic centimeters. In this the maltose was estimated, by Fehling's solution. For ten cubic centimeters Fehling, there were required 12.5 cubic centimeters of the five hundred cubic centimeters of sugar solution. Taking the reducing power of maltose as sixty-two per cent. that of glucose*, the ten cubic centimeters Fehling's solution will reduce 0.0806 of maltose. Then, 12.5 : 500 : : 0.0806 : X = 3.224,—for the thirty grammes malt, or 10.74 per cent. of maltose in malt.

The residue left in the filter after removal of the dextrine and maltose is to be analyzed for starch. It was rinsed from the filter into a porcelain dish, and 1.5 cubic centimeters, of sulphuric acid were added, with water, to make 500 c. c., when the mixture was boiled from seven to ten hours, adding water to preserve the volume, until a portion gave no test by iodine for starch. After filtering and washing, the total filtrate was

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*Brown and Heron, 1879: *Jour. Chem. Soc.* XXXV, 619. O'Sullivan, 1872: *ibid.* XXV, 587,—gave it as sixty-five per cent.

boiled about five hours, keeping up the volume, and until addition of alcohol to a small portion gave no turbidity (absence of dextrine). After neutralizing with barium carbonate, washing till washings were free from glucose, concentrating, filtering, and making up to five hundred cubic centimeters, the glucose was estimated with Fehling's solution. For twenty cubic centimeters of the latter, 3.5 cubic centimeters of the sugar solution were required, indicating (1.75 : 500.00 : : 00.05 : ×) 14.28 grammes of glucose, or 12.85 grammes of starch, in the thirty grammes of malt,—the proportion of 42.83 per cent. The results, therefore, are as follows:

In Barley: Active starch, 65.16 per cent.; dextrine, 5.40 per cent. *In Malt:* Active starch, 42.83 per cent.; dextrine 4.06 per cent.; maltose,* 10.74 per cent.

The starch is stated above as "active starch," being that large portion of natural starch which is pure starch in a chemical sense, and which, therefore, can be wholly converted to glucose by dilute acids, or to maltose by diastase. Natural starch—composed of the entire starch granules, according to Philipp,† besides 17 .5 per cent. of water, and a very little mineral matter, a certain amount of starch cellulose which is not convertible with starch into sugars. Therefore the starch estimated mechanically, by washing from ground grain, should be somewhat more than that estimated chemically, by conversion to sugar.

THE STRUCTURE AND ADULTERATIONS OF HYDRASTIS CANADENIS.

BY E. C. BASSETT, PH. C., SALINE, MICHIGAN.

As found in the market, the rhizome of Golden Seal is about one inch long and one fourth inch thick and is obtained with its numerous rootlets.

It is somewhat annulated and longitudinally wrinkled, the upper surface showing scars of former ærial stems; externally it is of a yellowish-gray color, internally, reddish-yellow, changing to brownish-yellow on keeping; fracture, short and waxy, showing a thickish bark, about ten narrow wood-wedges, broad medullary rays, and large pith.

The cells of the bark, medullary rays and pith consist of parenchyma, those of the bark and medullary rays containing granules of starch.

The wood-wedges consist of prosenchyma and are reticulated cells.

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* Lawes, 1866, gave as result of analyses, 11.01 per cent. of sugars (maltose) in malt. See, also, this journal, 1881: III, 548.

† 1867: *Zeit. Anal. Chem.*, VI., 471.

The principal adulterations of the rhizome are sanguinaria, cypripedium, tumeric, serpentaria and starch.

I obtained eighteen samples of the powdered hydrastis from the drug stores of Ann Arbor, Ypsilanti, Saline, and Detroit, and examined them under the microscope for adulterations.

The first five were found to be pure.

The sixth, eleventh, and fifteenth, samples contained a very little tumeric, and the ninth was about one fifth tumeric.

The seventh contained beside tumeric some indefinite organic matter, probably some root which had been powdered with the hydrastis.

The eighth contained a little bean starch with the tumeric.

The remainder were pure.

Thus from this examination we find six samples out of the eighteen, that were adulterated, and that tumeric is the principal adulterant to the powdered root.

ESTIMATION OF ESERIN IN PHYSOSTIGMA.

BY WILLIAM HAUENSTEIN, PH. C., BLUFFTON, OHIO

Various methods of estimating the alkaloid eserin is physostigma have been given in different books. The United States Dispensatory gives several ways by which this alkaloid has been extracted and afterwards criticises them, recommending one method, which I have found to be the best and have based my figures on results obtained by it.

Husemann's Pflanzenstoffe, Seite 68, gives another method, practically the same, but instead of forming the tartrate of eserin (as I have done) this method determines the alkaloid as sulphate. I also tried this method; but failed to obtain a satisfactory result.

The method upon which I base my results was also recommended by Stillé & Maisch's Dispensatory, and is as follows: The powdered Calabar bean was moistened with a one per cent. solution of tartaric acid and exhausted with alcohol. Evaporate the solution and treat the residue with water. Filter, then shake with several portions of ether, and remove the etherial solution. Then supersaturate with bicarbonate of potassium, and again agitate with ether. This etherial solution contains the alkaloid, and when evaporated the eserin is left in an amorphous, slightly purple mass and can be dried and weighed. The drying must be carried on below 40° centigrade as the mass liquifies and decomposes very easily on the application of heat. Another great difficulty in this work is the instability of the alkaloid. At first I found it impossible to obtain any alkaloid free from resins, etc. But with experience, I discovered that the extraction was more complete if done with smaller and more frequent portions of ether.

For each extraction I used sixty grammes of the powdered Calabar bean, and in several cases I macerated twenty-four hours, and found it to agree pretty well with the samples which were not macerated.

The following results were obtained:

	Weight of alkaloid.	Per cent. of alkaloid.
First estimation	.180	.300
Second estimation	.184	.366
Third estimation	.168	.280
Fourth estimation	.172	.288

Some of the tests for the alkaloid are as follows: With nitric acid it gives a yellow color; with alkalies it gives a red color; with sulphuric acid it gives a yellow color, turning to a green, and when potassium dichromate is added, it turns blue, then red, finally fading. This test very nearly corresponds to the well-known strychnine test, for which it is very easily mistaken.

To distinguish it from strychnine it may be noticed that with sulphuric acid alone eserin turns yellow and strychnine remains colorless. Chlorine water also turns eserin red.

THE RECOVERY OF ARSENIC FROM ORGANIC MATTER BY CORROSION, DISTILLATION, AND BY GAUTIER'S METHOD.

BY HERMAN J. HOLTHŒFER, PH. C., DETROIT, MICHIGAN.

[IN ABSTRACT].

The three methods used for the recovery of arsenic from organic matter, are by corrosion, by distillation, and by Gautier's method.

The method by corrosion is the one most frequently used and consists, in brief, in thoroughly oxidizing the organic matter by means of chlorine generated by hydrochloric acid and potassium chlorate. The arsenic is finally obtained by the Marsh apparatus.

The distillation method consists in heating the suspected matter with strong hydrochloric acid in a retort on the sand bath. The arsenic goes over into the receiver as a chloride and the distillate is tested in Marsh's apparatus.

Gautier's method consists in oxidizing the organic matter with strong nitric and sulphuric acids. The arsenic is converted into arsenic oxide and this may be heated as high as 160° Centigrade without loss by volatization. An aqueous solution of this oxide is tested in Marsh's apparatus.

With the view of determining which of these methods yields the best results, I mixed a certain small amount of arsenic with liver substance and separated and estimated the arsenic as shown in the following tables:

I.—CORROSION METHOD.

	Organic matter.	Grammes $AS_2 O_3$.	
1	2 ounces of liver.	.00127	Recovered .00073 grammes $AS_2 O_3$.
2	2 ounces of liver.	.00127	Recovered .00068 grammes $AS_2 O_3$.
3	2 ounces of liver.	.00127	Recovered .00074 grammes $AS_2 O_3$.

II.—DISTILLATION METHOD.

	Organic matter.	Grammes $AS_2 O_3$.	
1	2 ounces of liver.	.00127	Recovered .00071 grammes $AS_2 O_3$.
2	2 ounces of liver.	.00127	Recovered .00070 grammes $AS_2 O_3$.
3	2 ounces of liver.	.00127	Recovered .00068 grammes $AS_2 O_3$.

III.—GAUTIER'S METHOD.

	Organic Matter.	Grammes $AS_2 O_3$.	
1	2 ounces of liver.	.00127	Recovered .00095 grammes $AS_2 O_3$.
2	2 ounces of liver.	.00127	Recovered .00093 grammes $AS_2 O_3$.
3	2 ounces of liver.	.00127	Recovered .00094 grammes $AS_2 O_3$.

From these results I draw my conclusion that the last method is the best.

LIMIT OF THE TESTS FOR STRYCHNIA.

BY G. A. KIRCHMAIER, PH. C., TOLEDO, OHIO.

It is of considerable interest and importance to know exactly the smallest amount of strychnine that can be detected in different articles of food, and the smallest fatal dose that can be given and still furnish reliable evidences of its presence. For the purpose of ascertaining this, the series of experiments that are hereafter set forth were made. As a representative of the fluid portion of our food, water was taken and the limit obtained in an aqueous solution of sulphate of strychnine; to represent the solid portion, bread and meat were taken and the limit here also obtained, and lastly cats were used to determine the limit of test when introduced into the body.

All the experiments were made independently and are given exactly as obtained without any comparisons whatever with the results of others; and in fact none were found that exactly bear upon the subject.

Whether the experiments will be of any practical use or not, cannot, of course, be told, but the uses to which they might be put, if an occasion occurred, make them of scientific interest.

I.—LIMIT OF TEST IN WATER SOLUTION.

In the following experiments a definite number of cubic centimeters of a known solution of strychnine sulphate was taken, evaporated to dryness in a white porcelain dish, the residue thoroughly rubbed with a drop of sulphuric acid by means of a glass rod, and then a small fragment of dichromate of potash drawn through it, and a purple flash passing immediately through red to red violet and then fading showed the presence of strychnine.

The solution used was made by dissolving .0025 grammes of sulphate of strychnine in 1,000 cubic centimeters of distilled water at the temperature of the room (65° to 70° Fahrenheit), each cubic centimeter therefore representing .0000025 grammes of the salt.

The following tabulated statement shows the results:

Experiment.	Number of cubic centimeters of the solution used.	Amount (in grammes) of the salt represented.	Test.
Number 1....	5.	.0000125	Distinct
Number 2....	4.	.00001	Distinct
Number 3....	3.	.0000075	Distinct
Number 4....	2.	.000005	Distinct
Number 5....	1.	.0000025	Good, but change of color from purple, to red somewhat indistinct.
Number 6....	.8	.000002	Faint
Number 7....	.6	.0000015	Negative

II.—LIMIT OF TEST IN BREAD.

For this series of experiments the method of procedure was the following:

To a weighed portion of rye bread, a certain number of cubic centimeters of a water solution of the sulphate of strychnine of known strength was added, and the two thoroughly mixed, and allowed to macerate for twenty-four hours. At the expiration of this time the mass was treated with three successive portions of alcohol, acidulated with two drops of sulphuric acid, brought to the boiling point and filtered, first through cloth then through paper. The filtrates were mixed, evaporated to dryness or to a syrupy consistence and the cold remainder or residue treated with a fresh portion of alcohol and filtered; the filtrate evaporated to dryness and this residue treated with acidulated water and filtered; to this acid water solution, an equal volume of chloroform was added, then ammonia hydrate to a distinctly alkaline reaction and the mixture shaken several times; after standing some time the whole was poured upon a wet filter, the filtrate then shaken with another portion of chloroform and the two separated in the same way. The two chloroform solutions were now mixed, put into a porcelain dish and evaporated to dryness. To the residue a drop of sulphuric acid was added and the test made with dichromate of potash.

The solution used was made by dissolving .002 grammes of strychina sulphate in 100 cubic centimeters of distilled water at the temperature of the room (65° to 70° Fahrenheit) each cubic centimeter representing, therefore .00002 grammes of the salt.

The following table shows the results:

Experiments.	Grammes of bread used.	Number cubic centimeters used.	Grammes of salt represented.	Test.
Number 1	5	20	.0004	good
Number 2......	5	10	.0002	good
Number 3......	5	5	.0001	good
Number 4......	5	4	.00008	rather faint
Number 5......	5	3	.00006	very faint
Number 6......	5	2	.00004	negative

This makes the limit of the test for strychnia when mixed with bread .00006 grammes in five grammes of bread, .000012 grammes in one gram of bread.

III.—LIMIT OF TEST IN MEAT.

For these experiments the manipulations were conducted in exactly the same way as the preceeding and the strength of the solution was .008 of a gramme of strychina sulphate in one hundred cubic centimeters of water; each cubic centimeter representing, therefore, .00008 of a gramme. The results are tabulated below:

Experiments.	Grammes of meat taken.	Number cubic centimeters solution used.	Grammes of salt represented.	Tests.
Number 1.....	5	5.	.0004	good
Number 2.....	5	4.	.00032	good
Number 3.....	5	3.	.00024	good
Number 4.....	5	2.	.00016	good
Number 5.....	5	1.5	.00012	faint
Number 6.....	5	1.	.00008	very faint
Number 7.....	5	.8	.000064	negative
Number 8.....	50	5.	.0004	good
Number 9.....	50	2.5	.0002	faint
Number 10....	50	2.	.00016	negative

This gives the limit as .000004 grammes in one gramme of meat.

IV.—EXPERIMENTS WITH CATS.

Experiment one—In this experiment one-quarter of a grain of strychnine sulphate was injected hypodermically in the middle of the back. The cat died in two minutes. After one-half hour the cat was dissected and the heart, liver, kidneys, stomach, a portion of muscle from the hind leg and a small piece from near the puncture were removed. After forty-eight hours the tests were made and the only result obtained was from the muscle taken from the back.

Experiment two—In this case one-sixth grain was injected same as above. Death occurred in two and one-fourth minutes. The same organs were tested with the same results.

Experiment three—In this experiment the cat was placed fully under the influence of chloroform, and then one-eighth grain was injected under the breast, producing death in four and one-half minutes. Dissection was made one-half hour after death, and the blood, liver, heart, kidneys, stomach, muscle of hind leg were saved.

A faint test was obtained from the blood, liver and heart.

Experiment four—After the cat was placed under the influence of chloroform one-thirty-second grain was injected in the saphenus vein, producing death in eight minutes. After three-quarters of an hour the liver, heart, kidneys, stomach and blood were removed and tested. A positive result was obtained only from the blood.

Experiment five.—In this experiment one-thirty-second grain was given by the stomach, death occurred in eleven minutes. After twelve hours the stomach, liver, kidneys were removed and positive result obtained only with the first.

Experiment six—Here one-sixtieth grain was given by stomach, causing death in twenty minutes. Dissection immediately after this. The poison could not be detected in stomach, liver or kidneys.

The following is a tabulated statement of these experiments:

Experime't.	Heart.	Liver.	Kidneys.	Stomach.	Blood.	Muscle from hind leg.	Muscle from near the puncture
Number 1....	no test	no test	no test	no test	no test	no test	test
Number 2....	no test	no test	no test	no test	no test	no test	test
Number 3....	test	test	no test	no test	test	no test	
Number 4....	no test	no test	no test	no test	test		
Number 5....		no test	no test	test			
Number 6....		no test	no test	no test			

Experiment.	Given by.	Amount given.	Time before death.	Chloroform.
No. 1.....	Injection in middle of back	one-quarter grain	two minutes	
No. 2.....	Injected in middle of back	one-sixth grain	two and one-quarter minutes	
No. 3.....	Injected in the breast.	one-eighth grain	four and one-half minutes	used
No. 4.....	Injected in the saphenus vein	one-thirty-second grain	eight minutes	used
No. 5	Given by stomach	one-thirty-second grain	eleven minutes	
No. 6.....	Given by stomach	one-sixtieth grain	twenty minutes	

V.—LIMIT OF TEST IN WATER SOLUTION WITH FOUR GENERAL ALKALOID REAGENTS.

The reagents are:

(1) Mayer's solution. Made by dissolving 7.8 grains of $HgCl_2$ and twenty-one grains KI in one ounce and one drachm of distilled water.

(2) Iodine and potassium iodide. Made by dissolving twenty-four grains of I and forty grains of KI in six and two-thirds drachms of distilled water.

(3) Potassio-cadmic iodide solution made by dissolving twenty grains CdI_2 and forty grains of KI in two drachms of distilled water.

(4) Phosphomolybdic acid solution (Sonnenschein's reagent).*

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*See Douglas and Prescott's Qualitative Analysis page 154, foot-note

In every case the test was made in one cubic centimeter, that is wherever less than one cubic centimeter of solution was used enough distilled water was added to make up to one cubic centimeter with two drops of the reagent used. The solution used was made by dissolving gram .002 in one hundred cubic centimeters distilled water.

The following is a tabulated statement of results:

No. cubic centimeters of solution used.	Reagent No. 1.	Reagent No. 2.	Reagent No. 3.	Reagent No. 4.	The weight of salt represented.
1	precip.	precip.	slight precip.	precip.	.00002
.8	precip.	precip.	opalescent.	precip.	.000016
.5	precip.	precip.	no precip.	precip.	.00001
.4	cloudiness	faint cloudiness		cloudy	.000008
.3	cloudiness	no result		opalescence	.000006
.2	faint cloud			faint opalescence	.000004
.1	opalescent			no precip.	.000002
.05	faint opalescent				.000001

VI.—CONCLUSIONS.

With reference to the first three series of experiments, viz: those with aqueous solutions of the salt and those with bread and meat, it is unnecessary to say anything, nor anything with reference to the experiments with the general alkaloid reagents; but in regard to those made upon cats perhaps a few remarks would not be amiss. In the first two of the experiments the drug had its characteristic effect upon the spinal cord before it was distributed through the entire system, and hence the failure of obtaining tests in any other portion of the body than from near the puncture. In the next two, chloroform was used and the drug injected far from the spinal cord, the one under the breast, in which case tests were obtained in blood, lives and heart, the other directly into the blood by the saphenur vein, the blood alone giving a test. The difference in these results is due to the fact that in the latter only one-thirty-second of a grain was introduced while in the former one-eighth grain was used.

In the last two experiments the poison was introduced by the stomach, one-thirty-second grain in one case and one-sixtieth in the other. Where the one-thirty-second grain was used a test was obtained in the stomach only, the amount that was distributed to the organs not being large enough to furnish a test, while in the case of one-sixtieth grain *none* could be obtained in the stomach. It might be mentioned that the last two subjects were only half grown. From the above, the conclusion is that not less then one-thirty-second grain can be given either by the stomach or by intravenous injection to the cat and still furnish a satisfactory test.

For alkaloid test a watch glass was used. For other tests a white evaporating dish was used.

IS THE URINE ALKALINE AFTER HOT BATHS OR AFTER ALKALINE BATHS.

BY W. M. GIBSON, PH. C., PORTSMOUTH, OHIO.

Various statements have been made with reference to the influence of baths upon the reaction of the urine. Duriau* found that cold baths made the urine alkaline, that the addition of nitric acid to the bath did not prevent this change in reaction, and that the addition of sodium carbonate did not increase the alkalinity of the urine. With the purpose of determining the influence of hot baths and of warm alkaline baths upon the reaction, the following experiments have been made.

Before the baths were begun, the average acidity of the urine was taken. The urine was collected for fourteen days at 8, 9, 10, and 11:30 A. M., and the acidity estimated, a deci-normal sodium hydrate solution being used. It was found that one hundred cubic centimeters of urine required 23.5 cubic centimeters of sodium hydrate to neutralize it.

Hot baths were now tried for a week. No decrease in the acidity of the urine was noticed.

Alkaline baths were now tried, sixteen gallons of water and one and two pounds of sodium carbonate were used at each bath. The urine was not passed immediately before the bath, but was collected hourly thereafter.

The acidity was found to be decreased. The decrease was greater with an increased amount of alkali.

Dr. Vaughan suggested that the urine be passed every fifteen minutes after leaving the bath and its acidity estimated. Seven alkaline baths were now taken at temperatures varying from 86° to 98° Fahrenheit. The results of these baths can be seen by referring to the tables. When the acidity of the urine was such that ten cubic centimeters did not require more than one to 1.5 cubic centimeters of Na HO to neutralize it, the urine was rendered alkaline. When ten cubic centimeters of urine required from 2.5 to three cubic centimeters, of Na HO, it was not rendered alkaline, except in one instance, but the acidity was reduced. As a general summary to the tables we will say, that the average acidity of the urine, just before taking the bath was 24.6 cubic centimeters of Na HO for one hundred cubic centimeters of urine. The average immediately after the bath was fifteen cubic centimeters of Na HO for one hundred of urine, being a decrease of nearly forty per cent. Sixteen gallons of water and four pounds of sodium carbonate were used at each of the baths recorded in the tables. Ten cubic centimeters of the alkaline bath water, required fourteen cubic centimeters of a deci-normal solution of H_2SO_4 to neutralize it. Food and exercise were quite regular.

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* *Archives Generales*, 1856, Volume I, 167.

BATH NUMBER I.

Temperature.	Time. A. M.	Reaction.	Number of cubic centimeters.	Na HO or $H_2C_2O_4$.
86°F.	7.20	Acid	1.8 cubic centimeters	Na HO
	7.55	Acid	1. cubic centimeters	Na HO
	8.10	Acid	1. cubic centimeters	Na HO
	8.20	Alkaline	.2 cubic centimeters	$H_2C_2O_4$
	8.30	Alkaline	.6 cubic centimeters	$H_2C_2O_4$
	8.40	Alkaline	1. cubic centimeters	$H_2C_2O_4$
	8.50	Alkaline	1.4 cubic centimeters	$H_2C_2O_4$
	9.00	Alkaline	1.6 cubic centimeters	$H_2C_2O_4$
	10.30	Alkaline	3. cubic centimeters	$H_2C_2O_4$

Here it will be seen that the decrease in acidity increased for one hour, the bath having been finished about 7:30. The difference in the acidity at 7:20 and that at 8:30 may be represented as 2.4 degrees of the deci-normal solution.

BATH NUMBER II.

Temperature.	Time. A. M.	Reaction.	Number of cubic centimeters.	Na HO or $H_2C_2O_4$.
93°F.	8.00	Acid.	3. cubic centimeters	Na HO
	8.35	Alkaline.	.6 cubic centimeters	$H_2C_2O_4$
	8.50	Acid.	1.2 cubic centimeters	Na HO
	9.05		1.6 cubic centimeters	Na HO
	9.20		1.2 cubic centimeters	Na HO
	9.35		1.2 cubic centimeters	Na HO
	9.50		.8 cubic centimeters	Na HO
	10.05		.4 cubic centimeters	Na HO
	10.30		.6 cubic centimeters	Na HO

In this case the greatest decrease in acidity occurred in about thirty minutes and is represented by 2.4 degrees, the same as in the first bath. However, in this case, a secondary decrease in acidity is observed.

BATH NUMBER III.

Temperature.	Time. A. M.	Reaction.	Number of cubic centimeters.	Na HO or $H_2C_2O_4$.
93°F.	9.00	Acid	3. cubic centimeters	Na HO
	9.25	Acid	1. cubic centimeters	Na HO
	9.40	Acid	1.6 cubic centimeters	Na HO
	9.55	Acid	2.2 cubic centimeters	Na HO
	10.10	Acid	2.4 cubic centimeters	Na HO
	10.25	Acid	2. cubic centimeters	Na HO
	10.40	Acid	2.2 cubic centimeters	Na HO
	10.55	Acid	2.6 cubic centimeters	Na HO

In this experiment the decrease is two degrees, with a secondary slight decrease. It is probable, however, that the secondary decrease in acidity in all these experiments, in which it is observed, is due to the food taken at breakfast and not due to the bath.

BATH NUMBER IV.

Temperature.	Time. A. M.	Reaction.	Number of cubic centimeters.	Na HO or $H_2C_2O_4$
98°F.	7.30	Acid	1. cubic centimeters	Na HO
	8.00	Alkaline	1.6 cubic centimeters	$H_2C_2O_4$
	8.15	Acid	.8 cubic centimeters	Na HO
	8.30	Acid	1.2 cubic centimeters	Na HO
	8.45	Acid	1.6 cubic centimeters	Na HO
	9.00	Acid	1.2 cubic centimeters	Na HO
	9.15	Acid	1.4 cubic centimeters	Na HO
	9.30	Acid	1. cubic centimeters	Na HO

After this bath, the acidity decreased 2.6 degrees; but the effects of the alkali soon passed off.

BATH NUMBER V.

Temperature.	Time.	Reaction.	Number of cubic centimeters.	Na HO or $H_2C_2O_4$.
93°F.	10.20	Acid	3. cubic centimeters	Na HO
	10.50	Acid	2. cubic centimeters	Na HO
	11.05	Acid	2.2 cubic centimeters	Na HO
	11.20	Acid	2.4 cubic centimeters	Na HO
	11.35	Acid	2.4 cubic centimeters	Na HO
	12.M.	Acid	3. cubic centimeters	Na HO
	12.30	Acid	2.6 cubic centimeters	Na HO

In this case the decrease, as observed, is only one degree.

BATH NUMBER VI.

Temperature.	Time. A. M.	Reaction.	Number of cubic centimeters.	Na HO or $H_2C_2O_4$.
93°F.	8.00	Acid	2. cubic centimeters	Na HO
	8.30	Acid	1.4 cubic centimeters	Na HO
	8.45	Acid	1.2 cubic centimeters	Na HO
	9.00	Acid	1.8 cubic centimeters	Na HO
	9.15	Acid	2. cubic centimeters	Na HO
	9.30	Acid	1.6 cubic centimeters	Na HO

This gives a decrease of only .8 of a degree.

BATH NUMBER VII.

Temperature.	Time. A. M.	Reaction.	Number of cubic centimeters.	Na HO or $H_2C_2O_4$.
86°F.	7.15	Acid	3.4 cubic centimeters	Na HO
	7.45	Acid	2.6 cubic centimeters	Na HO
	8.00	Acid	1.6 cubic centimeters	Na HO
	8.15	Acid	1.2 cubic centimeters	Na HO
	8.30	Acid	.6 cubic centimeters	Na HO
	8.45	Acid	.6 cubic centimeters	Na HO
	9.00	Acid	1.6 cubic centimeters	Na HO
	9.15	Acid	1.8 cubic centimeters	Na HO
	9.30	Acid	1.6 cubic centimeters	Na HO

The greatest decrease here is 2.8 degrees.

It seems evident from these experiments that the use of alkaline baths may be of marked benefit in those cases in which the alkalinity of the blood should be increased, as in certain rheumatic affections.

ESTIMATION OF CAFFEINE IN THE FLUID EXTRACT OF GUARAUA.

By ERNEST HOSACK, PH. C., FREDRICKTOWN, OHIO.

Caffeine $C_7H_{10}N_4O_2$

Caffeine has a slightly bitter taste; but is free from odor.

It is sparingly soluble in cold water; but quite readily in hot water.

In alcohol and ether it is soluble at a low temperature; but it is best soluble in chloroform.

It dissolves readily in nitric and sulphuric acids.

The per cent of alkaloid caffeine in the fluid extract of guaraua ought to be about five; but is found on an average of about one and a half to two per cent.

I estimated the per cent. of caffeine in seven different specimens. The process for extraction is taken from Allen's Commercial Organic Analysis, Volume II page 503.

The fluid extract of guaraua is weighed in a tarred vessel, and evaporated to dryness on the water-bath until it is of a syrupy consistency.

About an equal bulk of magnesium carbonate [$MgCO_3$] is added. The magnesium carbonate is added to make it alkaline and to prevent the fluid extract from becoming a solid.

The mass is pulverized and placed in a Xoxheth's tube. [Allen's Commercial Analysis, Volume II page 503].

The caffeine is readily dissolved out by the use of chloroform in this repercolating apparatus.

The chloroform solution is now evaporated to dryness, and extracted with three or four portions of alcohol and filtered.

The alcohol is allowed to evaporate spontaneously, and the caffeine obtained in a mass of fine white crystals.

The crystals are now weighed and the per cent of caffeine calculated from the result.

I found the per cents of caffeine in the seven different specimens to vary slightly as shown in the following: Number one, 1.68 per cent; Number two, 1.65 per cent; Number three, 1.58 per cent; Number four, 1.51 per cent; Number five, 1.44 per cent; Number six, 1.10 per cent; Number seven, 1.30 per cent.

I worked the first four samples through twice and the per cents varied only slightly.

This statement about five per cent. caffeine being in the fluid extract is found in all books; but it is believed to be untrue, as I have obtained samples from the best manufacturers.

PURITY OF THE SULPHATE OF CINCHONIDINE IN USE, AND DELICACY OF THE PHARMACOPŒIAL TEST.

BY LOUIS W. SCHMIDT, PH. C., FORT WAYNE, INDIANA.

Samples of sulphate of cinchonidine put on the market by *six* manufacturers were obtained—*five* of the manufacturers being in the United States, and *one* in Germany. It could not be ascertained that any other American manufacturers produce the article. The samples were taken, or were credibly assured to have been taken from the manufacturer's cans, with the exception of one sample that had been canned by a wholesale dealer who gave a statement of the manufacturer's name. In all, *twelve* samples were obtained and tested—*four* samples of one manufacture, *three* samples of another, *two* of another, and *one* sample from each of three manufacturers whose brands of this article are not so extensively used.

The test for cinchonine and quinidine sulphates as directed in the United States Pharmacopœia of 1880, was applied to each sample, with exact and uniform control of the conditions. The test is given as follows: "If 0.5 gramme of the salt be digested with twenty cubic centimeters of cold distilled water, 0.5 gramme of tartrate of potassium and sodium added, the mixture macerated with frequent agitation, for one hour at 15° Centigrade (59° Fahrenheit), then filtered, and a drop of water of ammonia added to the filtrate, not more than a slight turbidity should appear (absence of more than 0.5 per cent. of sulphate of cinchonine, or of more than 1.5 per cent. of sulphate of quinidine.)" The test-limit only requires that not more than a slight turbidity should appear on adding—or immediately, or very soon, after adding—the ammonia. In applying the test, after adding the ammonia the liquids were set aside and examined from time to time, noting the temperature, until after fifteen to eighteen hours standing, for the occurrence of turbidity.

All but one of the twelve samples were approved by the test, according to the pharmacopœial standard. In fact, all but one were found to show a satisfactory margin of purity beyond the bare limit of the pharmacopoeia,—no one of the eleven giving *any* turbidity immediately, or very soon, after adding the ammonia. In the case of *eight* of the samples, a slight turbidity appeared only after standing for fifteen to eighteen hours at 70° to 80° Fahrenheit. With *two* of the samples, a slight turbidity appeared only after standing six hours, at about the same temperature as the others. With *one* sample the slight turbidity appeared after standing some time, the number of hours not noted. The one sample, which did not come up to the standard, gave a result in very strong contrast with the results of all the others,—the addition of the ammonia causing at once, more than a turbidity, an abundant precipitate. This sample was the one which was canned by a wholesale dealer, not a manufacturer.

In investigation as to the delicacy of the pharmacopœial test, some work was done, to gain further evidence as to the interpretation of the test-limit, namely: "absence of more than 0.5 per cent. of sulphate of cinchonine, or of more than 1.5 per cent. of sulphate of quinidine." This value of the limit has been partly supported by the experiments of Mr. Teeter,* and some other statements, but additional evidence was deemed desirable. Pure sulphates of cinchonidine, cinchonine, and quinidine were prepared, as done by Mr. Teeter, and previously by Mr. Thum.† Mixtures of the pure cinchondine salt, successively with one per cent., one-half per cent. and one-fourth per cent. of the pure cinchonine salt and again of the pure quinidine salt, were subjected to the test of the pharmacopœia, as before described, and were found to give results as follows

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* University of Michigan, School of Pharmacy, C. W. Teeter, 1880. *New Remedies* IX, 258, reprinted.

† Proceedings American Pharmaceutical Association, 1878, page8 28.

(the temperatures being those of the atmosphere at conclusion of the test):

Cinchonidine sulphate with admixture of cinchonine sulphate:
- One per cent., a precipitate on standing ten minutes, 70° Fahrenheit.
- One-half per cent., turbidity on standing fifteen to sixteen hours, 70° Fahrenheit.
- One-quarter per cent., no turbidity on standing twenty-four hours, 72° Fahrenheit.

Quinidine sulphate, one per cent., decided turbidity, at once, 70° Fahrenheit.
- One-half per cent., slight turbidity, after two to four hours, 76° Fahrenheit.
- One-quarter per cent., no turbidity on standing twenty-four hours, 80° Fahrenheit.

The results agree quite well with those of Mr. Teeter. And from both his investigation and this briefer one it would appear, contrary to ordinary expectation, that this test reveals quinidine in very nearly as small quantities as it does cinchonine, and that the interpretation of the pharmacopœial test-limit might be so modified as to read, absence of more than one per cent. of either sulphate of cinchonine, or sulphate of quinidine.

It follows of course from market values that there is greater liability of considerable proportions of cinchonine than of quinidine salt, but imperfect separations in manufacture may leave either impurity in quantities somewhat larger than fair pharmaceutical purity should admit.

THE COMPARATIVE DELICACY OF THE VARIOUS TESTS USED FOR DETECTING ALBUMEN IN THE URINE.

BY FRED A. COOKE, PH. C., FLINT, MICHIGAN,

Recently quite a discussion has been carried on in the leading English medical journals as to the comparative value of certain reagents used in testing for albumen in urine. Dr. Johnson, (*London Lancet*, Nov. 4, 1882), first called attention to the value of a saturated aqueous solution as a precipitant for albumen in the urine. Dr. Pavy took occasion to differ from Dr. Johnson as to the value of this reagent, and later the former presented the claims of potassium ferrocyanide in the presence of acetic or citric acid as a delicate test for albumen. This controversy between these learned doctors seems to have been carried on with all the bitterness which too frequently characterizes the conduct of rival village doctors. With the desire of getting at the core of this matter, I determined, at the suggestion and with the aid of Dr. Vaughan, to make some comparative tests with the various reagents.

A specimen of albuminous urine, which yielded a coagulum on the application of either of the three tests, was diluted with successive volumes of water until the limit of the test for albumen with each reagent was reached. When the urine had been diluted with twelve times its volume of water, heat and nitric acid failed to give any *immediate* cloudiness, and when diluted with thirty-six volumes of water, there was no cloudiness with heat and nitric acid after standing twenty-four hours. Potassium ferrocyanide and citric acid failed to give an *immediate* cloudiness after the addition of twenty parts of water, and failed to give a cloudiness after standing twenty-four hours after the addition of forty-eight volumes of water. Picric acid continued to give an *instantaneous* cloudiness until forty volumes of water had been added, and it gave a cloudiness on standing twenty-four hours, until five hundred and sixty volumes of water had been added.

So far as giving an *immediate* result is concerned, the comparative values of heat and nitric acid, of potassium ferrocyanide and citric acid, and of picric acid may be represented by the figures, twelve, twenty and forty respectively. If the test be allowed to stand, the values of the same reagents may be represented by the figures, thirty-six, forty-eight and five hundred and sixty. That the cloudiness with picric acid was not due to any normal constituent of the urine was shown by adding the reagent to a sample of normal urine and allowing it to stand with the albuminous specimen. In another case a specimen of albuminous urine was treated with heat and nitric acid and filtered. The filtrate failed to give any further test for albumen with heat and nitric acid, but yielded immediately a precipitate on the application of the picric acid solution. All physicians know the great inconvenience of carrying a bottle of nitric acid; but the picric acid solution may be carried without inconvenience, or the dry crystals may be carried and dissolved in water as needed.

DISTRIBUTION OF ARSENIC THROUGH THE BODY IN ARSENICAL POISONING.

BY VICTOR C. VAUGHAN, M. D., AND J. H. DAWSON, PH. C.

[IN ABSTRACT.]

Arsenic is the great popular poison for suicidal and criminal purposes and many mournful cases of death from arsenical poisoning have furnished ample opportunities for studying the physiological effects which precede death from this poison.

Although the symptoms are in most cases well marked and unmistakable, yet we find cases recorded (Taylor on poisons) in which the symptoms were those which we would ordinarily expect to be produced by a narcotic poison. Hence we see that although the symptoms observed to take place before death may in most cases furnish valuable hints, they by no means can be considered as proofs.

It would seem from all that has been said and done upon this subject, that it would be useless to say or do more with it. But we are persuaded by the many perplexing questions which still continue to rise and to puzzle the best authority in the country that more work is needed on this subject than has yet been done. It has been our object in the following work to discover the per cent. of arsenic which goes to the different organs in cases of arsenical poisoning. With this end in view we took one case of chronic poisoning with arsenious oxide (As_2O_3), two of acute poisoning with arsenious oxide, and two of acute poisoning with sodium arsenite (Na_3AsO_3). The first experiment representing a case of chronic arsenical poisoning was conducted on a small dog as follows: 6.85 grammes of solid white arsenious oxide were given to the dog with meat during a period of sixteen days, in doses increasing from three hundred and thirty-five milligrams to one gramme at a dose. Seventy-two hours after the dose was administered the dog was killed and the following parts removed and a quantitative estimation of the arsenic which they contained made with the following results:

	Weight Taken.	As_2O_3 Found.	Percentage of As_2O_3.
Spleen..........	18 grammes	.00062	.00344
Kidneys.......	65 grammes	.00065	.00100
Liver............	260 grammes	.01040	.00400
Lungs...........	95 grammes	.00040	.00042
Stomach and Contents...	152 grammes	.02530	.01664
Large Intestine..........	42 grammes	.01520	.03619
Small Intestine..........	70 grammes	.00030	.00042
Muscles from Thigh........	116 grammes	.00031	.00026
Muscles from Abdomen..	95 grammes	.00020	.00021
Heart..	175 grammes	.00034	.00019
Blood..	60 grammes	A very faint mirror	
Urine.......... ..	41 grammes	.00060	.00146
Testicles.......	22 grammes	.00030	.00136
Brain............	71 grammes	.00013	.00018
	1282 grammes	.05475 As_2O_3	.00419 per cent. of As_2O_3

The second experiment represents cases of acute poisoning with arsenious oxide and was conducted as follows: Two rabbits, one large and the other small, were given solid white arsenious oxide. To the larger two grammes were given and to the smaller one gramme was given. They died in about ten hours and the following parts were removed and a quantitative estimation of the arsenic which they contained was made:

LARGER RABBIT WEIGHED 1520 GRAMMES.

	Weight Taken.	As_2O_3 Found.	Percentage of As_2O_3.
Kidneys.......	20 grammes	.00132	.00660
Liver............	25 grammes	.00264	.01056
Lungs...........	7 grammes	.02640	.37714
Stomach and Contents...	170 grammes	1.62400	.95529
Large Intestine...........	156 grammes	.23760	.15230
Small Intestine...........	55 grammes	.00158	.00287
Muscle from Abdomen...	40 grammes	.00026	.00065
Muscle from Thigh........	47 grammes	A distinct mirror	
Heart...........	10 grammes	.00124	.01240
Brain...........	5 grammes	A distinct mirror	
	535 grammes	1.89504 As_2O_3	.35421 per cent. of As_2O_3.

SMALLER RABBIT WEIGHED 562 GRAMMES.

	Weight Taken.	As_2O_3 Found.	Percentage of As_2O_3.
Kidneys.......	8 grammes	.00053	.00662
Liver............	32 grammes	.00164	.00512
Lungs...........	12 grammes	.01320	.11000
Stomach and Contents....	75 grammes	.66200	.88266
Large Intestine...........	62 grammes	.05702	.09196
Small Intestine...........	40 grammes	.00343	.00857
Muscles from Abdomen...	12 grammes	.00013	.00108
Muscles from Thigh........	12 grammes	A slight trace	
Heart...........	5 grammes	.00026	.00520
Brain............	4 grammes	A distinct mirror	
	262 grammes	.73821 As_2O_3	.28175 per cent. of As_2O_3.

The third experiment represents cases of acute poisoning with sodium arsenite and was conducted as follows: Two rabbits, one large and the other small, were given arsenious oxide in the form of sodium arsenite (Na_3AsO_3). To the larger, two grammes were given and to the smaller one gramme was given:

LARGER RABBIT WEIGHED 1977 GRAMMES, DIED IN 20 MINUTES.

	Weight Taken.	As_2O_3 Found.	Percentage of As_2O_3.
Kidneys........	19 grammes	.00330	.01736
Liver............	65 grammes	.01548	.02381
Lungs...........	45 grammes	.09240	.20533
Stomach and contents.....	70 grammes	.86100	1.23000
Large Intestine............	137 grammes	.04224	.03083
Small Intestine............	37 grammes	.00489	.01321
Muscles from Abdomen....	55 grammes	.00198	.00360
Muscles from Thigh	65 grammes	.00119	.00183
Heart............	10 grammes	.00264	.02640
Testicles........	13 grammes	.00026	.00200
Brain............	5 grammes	.00053	.01060
	521 grammes	1.02591 As_2O_3	.19691 per cent. of As_2O_3

SMALLER RABBIT WEIGHED 464 GRAMMES, DIED IN 4 MINUTES.

	Weight Taken.	As_2O_3 Found.	Percentage of As_2O_3.
Kidneys........	5 grammes	.00119	.02380
Liver............	36 grammes	.00831	.02308
Lungs............	8 grammes	.01056	.13200
Stomach and Contents.....	31 grammes	.54120	1.74580
Large Intestine............	73 grammes	.05795	.07938
Small Intestine............	21 grammes	.00660	.03142
Muscles of Abdomen.......	10 grammes	.00066	.00660
Muscles of Thigh..........	10 grammes	.00053	.00530
Heart............	2 grammes	.00158	.07900
Testicles........	.9 grammes	A slight mirror	
Brain............	3 grammes	.00019	.00633
	199.9 grammes	.62877 As_2O_3	.31454 per cent. of As_2O_3.

THE

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ORIGINAL ARTICLES.

A TABULAR STATEMENT OF THE SURGICAL WORK DONE IN THE DEPARTMENT OF MEDICINE AND SURGERY OF THE UNIVERSITY OF MICHIGAN DURING THE SCHOOL YEAR OF 1881 AND 1882.

BY DONALD MACLEAN, M. D.,
Professor of Surgery in the University of Michigan.

I have endeavored to present in as compact a form as possible the work done and the results obtained in my general surgical work during the winter of 1881 and 1882. By studying the table the various methods of treatment may be compared more advantageously than could be done if a long article had been written. I have omitted the cases of abdominal section, which I will present in a special article at some time in the future. Of course, the table does not contain the work done in special surgery by my colleagues. The table has been arranged by my former clinical assistant, Dr. E. A. Christian.

By delaying the publication for more than a year I have been able to confirm the statements in regard to the results obtained. I hope to be able to publish, in the next number of this journal, a similar tabular statement of the work done during the school year of 1882-83. Several of the most important of the cases in the following table will soon be published in detail.

NAME.	AGE.	DIAGNOSIS.	TREATMENT.	RESULT.
Maggie Maycock	7	Abscess of cheek	Evacuation of contents	Cure.
Fred Durgee	12	" " "	Advised to remove tooth	Cure.
Edward Brownell	22	Lumbar abscess	Free drainage and cast	No improvement.
Daniel Crooks	21	" "	" " "	Cure.
Clarence Bush	14	Anchylosis of elbow-joint	No treatment. Refused to submit	
Dell Clifford	13	" " " "	Passive movements	Improved.
Kimble McCollum	30	" " " "	Resection	Much improved.
John Andrew	24	" " knee "	Not amenable to treatment	
David Maules	28	" " " "	Refused to submit to treatment	
Joseph Patrick	10	" " " "	Left before treatment was instiuted.	
H. C. Wentworth	32	" " " "	Passive movements	Much improved.
H. L. Foote	16	" " wrist "	Advised passive movements	Left.
Robert Thompson	14	Aneurism of fem. artery	Tied external iliac	Cure.
Seymour Shulters	12	Varicose aneurism, ext. iliac	Left before treatment was instituted	
J. Mohr	52	Aneurism of temp. art	No treatment	
Courtland Earl	21	Arrested developm't genitals	Not amenable to treatment	
Mrs. Pooley's child	3 m's	Imperforate anus	Operation.	Cure.
Wm. Stowell	18	Bursa on hand	Subcutaneous incision and pressure.	Cure.
Oren Todd	26	" " wrist	Division of annular ligament	Cure.
H. A. Gish	20	Caries of sacrum	Received private treatment	
Geo. Hauck	16	" " foot	Ankle-joint amputation	Cure.
Edward Hosacker	20	" " hand	Amputation of wrist	Cure.
Wm. Nickel	20	" " spine	Free drainage	No improvement.
Maggie Perry	7	" " foot	Removal of bone and drainage	Improved.
Geo. Turner	20	" " sacro iliac joint	Supporting and drainage	Improved.
Daniel Gibson	14	Necrosis of malar bone	Scraped bone	Improved.

J. B. McCaul	41	Necrosis of humerus	Removal of bone and drainage	Much improved.
John Single	12	“ “ jaw	“ “ “	Cured.
Mrs. Palmer	23	“ “ radius	“ “ “	Cured.
Thomas Gould	16	“ “ scapula	Treatment unnecessary	
Daniel Rich	18	“ “ femur	Removal of bone and drainage	Much improved.
Wm. Hammond	15	“ “ “	“ “ “	Much improved.
John Jones	29	“ “ “	“ “ “	Much improved.
Albert Mack	15	“ “ “	“ “ “	Much improved.
Fred. Marsh	11	“ “ “	Free drainage	Much improved.
L. E. Ketchum	49	“ “ thumb	Amputation	Cured.
Fred Philips	17	“ “ tibia	Removal of bone and drainage	Improved.
E S. Avery	21	Necrosis of tibia	Treatment unnecessary	
Albert Alferink	12	“ “ “	Removal of bone and drainage	Cure.
Louis Chappel	6	“ “ “	“ “ “	Improved.
Geo. W. Holland	36	“ “ “	“ “ “	Improved.
Louis Mack	19	“ “ “	“ “ “	Improved.
Chas. Pulver	14	“ “ “	“ “ “	Improved.
Hannah Tien	19	“ “ “ and fibula	“ “ “	Improved.
Chas. Harrington	14	“ “ foot	No treatment	
C. H. Ferguson	19	Periostitis of tibia	Drilled into the bone	Improved.
Geo. Garvin	13	“ “ “	Fly blisters	Cure.
Benj. Shelts	22	“ “ “	Left before treatment was instituted	
Alex St. Charles	23	“ “ “	Fly blisters	Cure.
Chas. Peacock	13	“ “ femur	Treatment unnecessary	
Patrick Walsh	45	“ “ “	Actual cautery	Cure.
Dr. Walters	30	“ “ humerus	“ “	Cure.
Chas. Ferguson	39	“ “ “	Fly blisters	Cure.
Mrs. Uphouse's ch'd	18 m's	Contraction from burn	Advised against interference	
Frank Andrews	3	Contraction from burn	Not Amenable to treatment	
Lafayette Bedon	23	“ “ “	“ “ “	
Mrs. Burleson		“ “ “	“ “ “	
Adelia Van Aukens	17	“ “ “	“ “ “	
Belle Roberts	13	“ “ “	Plastic operation	Improved.

NAME.	AGE.	DIAGNOSIS.	TREATMENT.	RESULT.
Mr. Topish's child	16 m's	Contraction from burn	Advised against interference	
Hannah Kirkhoff	18	Hare lip	Operation	Cure.
Hellen Thresher	23	" "	"	Cure.
Moses Wilhelm	21	" "	"	Cure.
Louis Carpenter	10	Cleft palate	No Treatment	
M. A. Rhoades	17	" "	" "	
Bert Stimpson	31	Cystitis	Milk Diet and Injections	Improved.
Chas. Vreland	30	"	" " " "	Improved.
John Ureu	43	"	" " " "	Improved.
Mrs. Roberts	62	Eczema of breast	Turned over to medical clinic	
Joseph Smith	63	" " leg	Local application of butter milk	Cure.
John Connor	23	Enlarged glands	Tr. iodine, iron, cod-liver oil	Improved.
Michael Doyle	40	" "	Iodide potassium, cod-liver oil	Improved.
John Holden	20	" "	" " fly blister	Improved.
Mary Root	7	" "	" " " "	Improved.
Miss Russel	15	" "	" "	Improved.
Amos Rogers	70	Enlarged prostate	Tr. Fer. Chlor. and Ergot	Improved.
Nathaniel Boyd	65	" "	" " " " "	Improved.
Mrs. Engerson	25	Enlarged spleen	Medical treatment	
Wm. Connor	10	Enlarged tonsils	Excision	Cure.
Bertha Ellis	13	" "	"	Cure.
Fred. Henderson	21	" "	"	Cure.
Lydia Ringler	10	" "	"	Cure.
Mrs. Roland	19	" "	Actual cautery	Cure.
Milton Stimson	9	" "	Excision	Cure.
Wm. Z.	27	Fatty degen. of testicle	Castration	Cure.
John O'Neil	52	Felon	Free Incision	Cure.

Milton Haight	25	Felon	Free incision	Cure.
B. H. Brundige	62	Fissure in ano	Refused to submit to treatment	
M. J. Kinney	31	Fistula in ano	Operation	Cure.
F. D. Ketchum	24	" " "	"	Cure.
J. E. Smith	22	" " "	"	Cure.
Chas. Sanders	30	" of bladder	General Treatment	Improved.
Francis Guy	40	Spasm of sphincter ani	Stretching of sphincter	Cure.
John Todd	43	" " " "	" " "	Cure.
Richard Cerrol	30	Hemorrhoids	Excision and Ligation	Cure.
Wm. Nelson	61	"	Medical treatment	Improved.
Daniel Taylor	42	"	Excision	Cure.
W. E. Handley	27	Foreign body in bladder	No Treatment	
Mrs. Oak's girl	1	" " " larynx	Removal	Cure.
F. M. Wilcox	24	" " " hand	Operation and Removal	Cure.
Harvey DeKalb	70	" " " larynx	No treatment	
Chas. Creedon	31	Depressed fract. of skull	Expectant	Cure.
Dora Inglesby	17	Fracture of nose	Left before examination	
Geo. Mason's child	1	Separation of epiph. humerus	Short splint	Cure.
Mrs. Paxton	50	Ancient Collis fracture	Passive movements	
Royal P. Vorce	7	Old fract. ulna and rad	No treatment	
Walter O'Brien	72	" " " " "	" "	
John Whitlane	45	Extr. caps. fract. femur	" "	
E. K. Eby	23	Ununited fract. patella	" "	
H. S. Sanders	58	" " fib. and tib	" "	
Frank Cook	14	Fracture of fibula	" "	
Fred. DeGrotte	40	Fracture of tibia and fib	" "	
Geo. Lester	7	" " " " "	" "	
Pat Maroney	32	Comp. com. fract. of femur	Primary amputat. of thigh	Cure.
Jos. McNally	24.	Comp. com. fract. of fib. and tibia	Amputation of leg	Cure.
Horace Dallue	27	Ununited fracture of tibia	No treatment	
James Bell	30	Old disloc. of shoulder	" "	

NAME.	AGE.	DIAGNOSIS.	TREATMENT.	RESULT.
Geo. Stender	55	Ancn't. disloc. of shoulder	No treatment	
Mrs. Smith	49	" " " hip	" "	
Nellie Dennison	9	" " " knee	" "	
Wm. McAuley	38	" " " ankle	" "	
Mrs. Alexander		Senile gangrene	Amputation of finger	Cure.
Mrs. S. C. Baker		Goitre	Iodid of potas. and merc. iod	Improved.
Miss Redinger		"	Potas. iodide and mer. biniodid..e	Improved.
Miss Watson		"	Tapping and injection of iodine	Improved.
Richard Smith		"	No treatment	
L. L. Simpson	31	Hip-joint disease	Extension	Improved.
Viva Bentley	13	Hip-joint disease	Rest and extension	Improved.
John Burns child	3	" " "	" " "	Improved.
J. D. Pelltit	35	" " "	" " "	Cure.
Sarah Simmons	8	" " "	" " "	Improved.
Alonzo Thompson	19	" " "	" " "	Improved.
Wm. Hopkins	6	" " "	" " "	Improved.
Patrick Bourke	50	Hydrocele	Tapping and injection of iodine	Cure.
Edwin Bordeaux	43	"	" " " " "	Cure.
S. M. Faunce	49	"	" " " " "	Cure.
J. Hasalschwardt	54	"	Left without operation	
George Styles	44	"	Tapping and injection of iodine	Cure.
J. W. Stone	60	"	" " " " "	Cure.
Jas. Troy	45	"	" " " " "	Cure.
John Dubois	65	"	" " " " "	Cure.
Silas Engle	27	Impediment in speech	No treatment	
Benj. Hopkins	50	Imperfect nutrition foot	" "	
P. D. Martin	42	Inflamed swelling of neck	" "	

M. B. Prutzmgn	47	Inflamed swelling of neck	No treatment	
W. Ames	19	Ingrowing toe-nail	Extraction of nail	Cure
John Bowoncliff	30	Injury to shoulder-joint	Rest	Improved.
George Dixon	20	" " hip-joint	"	Improved.
J. N. VanLeenwen	24	" " knee-joint	" Cast	Improved.
Frank Lewis	32	Internal derangement joint	" "	Improved.
H. H. Mykrantz	17	Irritation of gluteal muscles	Fly blister	Cured.
Miss Clark	20	Malformed tooth	Extracted	Cured.
Mrs. Magoon	52	Carcinoma of breast	Unfit for operation	
Mrs. Goodrich	70	Cerebriform cancer, head	Not amenable to treatment	
R. G. Cooper	45	Cyst of forehead	Enucleation	Cure.
E. E. Hawley	18	" " neck	Free incision and tent	Cure.
W. A. Phillips	20	" " "	Enucleation	Cure.
Absalom Hart	50	" " parotid region	"	
Albert Black	24	Exostosis of tibia	Drilling of the bone	Improved.
A. D. McCabe	39	" " femur	Actual cautery	Cure.
Alva True	15	" " toe	Amputation of toe	Cure.
Mrs. Eagan	78	Epithelioma of cheek	Excision	Cure.
Abram Switz	76	" " "	Refused operation	
Mrs. Buckland	64	" " forehead	Operation	Cure.
Peter Etchells	81	" " hand	Actual cautery	Cure.
John Doran	61	" " lip	Excision	Cure.
James Cover	62	" " "	Operation	Cure.
J. P. Dresser	66	" " "	"	Cure.
Daniel McVey	35	" " "	"	Cure.
John McKinney	52	Epithelioma of lip	"	Cure.
Robert Warden	62	" " "	Unfit for operation	
Chas. Collins	64	" " "	Removed by operation	Cure.
Ole Ostby	20	" " tongue	Excision of half of tongue	Cure.
Mrs. Solomon	38	Fatty tumor of neck	Operation removed	Cure.
Dr. Anderson		" " " "	Refused an operation	
Mrs. O'Connor	37	" " " "	Removed by operation	Cure.

NAME.	AGE.	DIAGNOSIS.	TREATMENT.	RESULT.
Mrs. Pierce	42	Fatty tumor of axilla	Removed by operation	Cure.
Mrs. Palmer	55	" " " shoulder	" " "	Cure.
Mrs. Beebe	30	" " " side	Advised to leave alone	
J. W. Yawger	72	" " " thigh	Removed by operation	Cure.
Theo. Philbern	41	Lupus tumor cheek and hand	Paquelin's cautery	Cure.
Wm. Dean	55	" " eye, exedens	Arsenic and iodoform	Improved.
Furman Johnson	51	" " face exedens	Actual cautery	Cure.
Eliza Shaffer	56	" " forehead	" "	Cure.
Mrs. Ruthruff	43	" " nose	Arsenic and astringents	Cure.
John Gallup	68	" " "	Advised against interference	
Cassius Briggs	17	Malig. tumor, base of brain	Unfit for operation	
Julius Ayres	69	" " cheek	" " "	
James Lipsomb	59	" " forehead	" " "	
A. Winslow	67	" " upper jaw	" " "	
J. Kheg	62	Epithelioma of lip	Removed	Cure.
Isaac Townsend	26	Malig. tumor of perineum	Unfit for operation	
Patrick Donnelly	50	" " " rectum	" " "	
Richard Elliot	64	" " " "	" " "	
Wm Penney	38	Prostatic tumor	Ergot and iron	Improved.
Martha Coyle	24	Parotid tumor	Did not submit to treatment	
Miss Milligan	20	Osteo-sarcoma lower jaw	Excision of half of jaw	Cure.
August Sobrofski	39	" " " "	" " " " "	Returned.
H. J. Brown	50	Round cell-sarc parotid	Removed. Tied com. carotid	Returned.
Mary Flannegan	37	" " " upper jaw	Removal of jaw	Cure.
Jerry Cahill	44	Spindle " " forehead	Removed by operation	Cure.
Mrs. Stetter	47	Scirrhus of breast	Unfit for operation	
Elizabeth Meyer	38	" " "	Excision of breast	Death.

Mrs. Clancy	42	Scirrhus of breast recurrent	Removed by operation	Cure.
Mrs. D. Perry	46	" " " "	" " "	Cure.
Mrs. Cook	49	" " " "	" " "	Cure.
Kate Maloney	20	Supra orbital tumor	Unfit for operation	
Mrs. Heizer	31	Uterine fibroid	Assigned to gynæcol. clinic	
John Taylor	47	Wart on lip	Removed by operation	Cure.
Mrs. Nichol.	55	" in mouth	" " "	Cure.
Eddie Lockwood	7	" on neck	Did not submit to operation	
Mrs. Cady	43	Wens	Removed by operation	Cure.
Mrs. Green	48	Ovarian cyst	Refused operation	
Frank Nichols	53	Suppurating corn	Incised	Cure.
Daniel Hone	59	Lupus non-exedens neck	Actual cautery	Cure.
Cornelius Brazee	64	Cerebriform cancer, clavicle	Unfit for operation	
Daniel Murphy	58	Lupus of eye	Excision	Cure.
James Goble's child	1	Nævus on lip	Actual cautery	Improved.
Mabel Parish	6	" " cheek	Treatment unnecessary	
Jno. Stratton's child	7 m's	" " forehead	Actual cautery	Cure.
James Waterson	70	Orchitis	Evaporating lotions	Cure.
Alfred Chappel	32	Paralysis of arm	Electricity and count. irrit	Improved.
James Giles	20	" " foot	Treatment unnecessary	
Mrs. Sutherl'd's boy	16 m's	Phymosis	No treatment	
C. D. Hodges	35	Result of ulcer, of nose	Plastic operation	Good.
Dennis McCarty		" " bite on nose	" "	Good.
Elias Ennest	49	Nasal polypi	Removed	Cure.
Thomas Shipley	6	" "	"	Cure.
Wm. Fisher	26	Prostatitis	Bougies and iodoform	Cure.
John Coyle	21	Muscular rheumatism	Counter irritation, etc	Improved.
Patrick Phelan	45	" "	" " "	Improved.
James Hughes	6	Rickets	Dietetic and syr. fer. iodide	Unknown.
Jerome Hanshrue	19	Sciatica	Stretching of nerve	Cure.
George Beckey	21	Sinus of scrotum	Treatment unnecessary	
Wm Florey	21	" " neck	Free drainage	Cure.
Albert McGleuth	35	" " "	Incisions and free drain	Cure.

NAME.	AGE.	DIAGNOSIS.	TREATMENT.	RESULT.
Ebram Moffit	27	Ischio-rectal sinus	Free opening and drainage	Cure.
W. D. Smith	38	“ “ “	Free drainage	Cure.
Miss Roadhouse	25	Lumbo-sacral sinus	“ “	Improved.
Dennis Fahey	5	Lateral spinal curvature	Swinging and cast	Much improved.
Amanda Meister	15	“ “ “	“ “ “	Much improved.
Frank McElrath	12	“ “ “	Stimulation of muscles, swing	Unknown.
Mary Kean	12	Ant. post “ “	Swinging and cast	Improved.
Mrs. Aldrich's boy	9	“ “ “ “	Not amenable to treatment	
C. W. Hammond	35	Sprain of knee-joint	Cast and rest	Cure.
Lars Nelson	42	“ “ “ “	“ “ “	Cure.
Louis Carles	21	Stone in the bladder	Left lat. lithotomy	Cure.
W. T. Collinge	21	“ “ “ “	“ “ “	Cure.
Mrs. Autinreib	21	Stricture of oesophagus	Dilitation	Improved.
Augustus Backus	27	“ “ urethra	No treatment	
Robert Clark	31	“ “ “	“ “	
Alex Caisson	55	“ “ “	Internal urethrotomy	Cure.
Stephen Dokey	40	“ “ “	External	Death.
Silas Ellis	40	“ “ “	Dilitation	Improved.
Harvey Ludlum	30	“ “ “	“	Cured.
Nelson Todd	50	“ “ “	Dilitation	Improved.
James Jones	48	“ “ “	External urethrotomy	Cure.
Steve Crosby	9	Supernumary finger	Amputation	Cure.
Bessie Russell	15	“ “	“	Cure.
Charles Hubner	22	Synovitis of knee-joint	Cast and withdrawal of fluid	Improved.
Bird Johnson	16	“ “ “ “	Anti malarial and elim	Cure.
Kate Quinn	23	“ “ “ “	Sayre's extens. splint	Much improved.
Miss Roadhouse	25	“ “ “ “	Cast and tonics	Improved.

William Wolfe	26	Synovitis of knee-joint	Cast and elinative	Cure.
J. L. Bartham	26	" " " "	Cast	Improved.
Mrs. Orvis' child	1	Talipes equinus	Tenotomy and artificial muscles	Cure.
Bella Simpson	7	" equino-varus	" " " "	Improved.
Mrs. Aldrich's child	18 m's	" " "	" " " "	Improved.
S. Bower's child	8 w'ks	" " "	" and passive movements	Cure.
Zelma Fay	12	" " "	" " artificial muscles	Improved.
W. H. Grace	21	" " "	No treatment	
Mrs. Jackman's boy	3	" " "	Tenotomy and artificial muscles	Cure.
Mrs. Jaurink's boy	15 m's	" " "	" " adhesive straps	Cure.
Alice Pervorce	7	" " "	No treatment	
Mrs. Tinsman's boy	13 m's	" " "	Tenotomy	Cure.
Ralph Meyers	6	" valgus	Artificial muscles	Improved.
Mary McCarthy	10	" valgus	" " and electricity	Unknown,
Edwin Smart	19	" valgus	No treatment	
A. Tinsman's boy	17 m's	" equino varus	Rubber muscles	Cure.
J. L. Dike	27	Tonsilitis	Scarification	Cure.
John Spitzer	23	Indolent ulcer, leg	Fly-blister, red wash, etc	Cure.
James Wilson	51	" " "	Black-wash, rubber bandage	Improved.
F. B. Warner	37	" " "	Red-wash, rest, etc	Cure.
Jacob Wagner	63	" " "	" " " "	Unknown.
Oscar Tobias	20	" " heel	Fly-blister, rest, etc	Cure.
Cyrus Cummings	64	" " leg	Red-wash, rubber bandage	Cure.
Charles Elliot	67	Indolent ulcer of leg	Red wash, rest, etc	Improved.
Peter Henson	31	" " " "	Rest-adhesive straps, etc	Improved.
Byron Irish	21	" " " foot	" and red wash	Cure.
Alfred Parker	67	" " " leg	" " black wash	Cure.
Malon Seeley	33	Varicose " " "	Rubber bandage and black wash	Improved.
F. A. Ferris	33	" " " "	" " " " "	Improved.
Louis Schœnborn	33	" " " "	" " " " "	Improved.
O. W. Beckworth	65	Rodent " " head	Scraping of skull	Cure.
Mrs. C.	30	Syphilitic " " nose	Constitutional	Improved.
John Fulton	23	Herpetic " " prepuce	No treatment	

NAME.	AGE.	DIAGNOSIS.	TREATMENT.	RESULT.
Mrs Gokey	36	Indolent ulcer of leg	Red wash and rest	Improved.
Albert Blachert	20	Varicocele	Radical operation	Cure.
Charles Huff	22	“	“ “	Cure.
Milan Wade	27	“	“ “	Cure.
John F. Rissler	25	“	“ “	Cure.
John Hanlon	44	Varicose veins	Elastic bandage	Unknown.
Steve Davis	35	Bubo	Iodine and iodide potass	Cure.
Alex. Carefort	31	Chancroid	Nitric acid	Cure.
Daniel Reed	27	“	No treatment	
Ward Chapman	35	Chafe on Penis	No treatment	
Edgar Hall	23	Gleet	Passage of bougie	Cure.
William Ulmer	25	Gonorrhea	Zinc sulphate injection	Cure.
Gardhefner's boy	4	Hereditary syphilis	Potass, iodidi et hydrarg	Unknown.
J. J. Recker	26	Primary “	Iodide of potassium	Unknown.
Wm. Maddison	22	Secondary “	“ “ “	Unknown.
Nelson Sharp	24	“ “	No treatment	
John Farrell	27	“ “	No treatment	
Julius Lindeman	32	Tertiary “	Iodide of potassium	Cure.
Mrs. Smith	40	Result of syph. ulceration	No treatment	
Carry Chick	30	Weakness of ankle-joint	Metallic support	Unknown.
Nellie H	4	White swelling	Cast	Much improved.
Peter Young	11	“ “	“	Cure.
Robert Henderson	35	Ulcer, of cartilage, knee-joint		
Zelma Fay	12	Wry neck	Tenotomy	Cure.
Miss T.	21	“ “	“	Cure.
Tillie O.	27	Scrofula	No treatment	
Mrs. S.	45	Scirrhus of breast	Removal	Cure.
Mike Mahoney	39	Ear bit off	Sutures	Cure.

EDITORIAL BRIEFS.

LAST June, the Regents of the University of Michigan requested the resignation of Dr. Franklin, professor of surgery in the Homœopathic Medical School, on account, it is said, of the learned professor's connection with the firm of K. & K., of Detroit. A Dr. Walton, of Cincinnati, was elected to the vacancy; but refused to accept. Some one from Iowa was appointed to the chair of obstetrics, and he has also refused to accept. It would seem that the school is in bad odour among its brethren. Since the beginning of the shool in 1876 not less than nine professors have resigned or refused positions. The total number of students in the department last year was fifty-eight.

THE following in a copy *verbatim et literatim* of a letter received by Dr. Shepard, of Grand Rapids. It shows the lofty attainments of a man who practices medicine in Michigan:

WAYLAND April 7 1882 GRAND RAPIDS MICH

I wish you would sent me a report of cases of ovarian diseases which you have treated also operations and Removal i have a friend a young Lady whom does have fits a year or 2 before her fits she had an inlargement of the lower parts of her Bowels i never saw her but by reading her mothers Letters the girl has an ovarian disease and i have a reason to believe her fits proseeds from her ovarian difficulty i would like your opinion Dr, i am acquainted with a Lady at Wayland is in a bad shape she had an ovarian disease years before she was aware of it, she is very fleshy i have treated her after she had 18 so-called Profeshional Physicians i was the 19th one my first i had to do was to Doctor away a water lizard which she drank in her girlhood days some 2 or 3 years she moved into our reagon of the Country a few miles off where i was Residing these Distressing feelings she had at the uper part of her Bowels and Stomach was very Prostrating to her still when she had fits she would be strong it took the strength of a 1100 horse to hold her i succeeded gitting the Lizard away, she was to my house at that time if i should ever call at your city i would call and se you i can relate such an assurance Personally than by Letter please let me hear from you soon. Yours, ———

DR. ROCKWELL, of Alba, Michigan, sends us an advertisement of a quack nostrum which is offered to sufferers in the northern part of the State. We give extracts showing the audacity of those who sell, and the superstition of those who buy:

THE REMEDY APPROVED BY GRACE.

This Medicine works miracles with every one, that makes use of it, and the Grace of the Omnipotent God is experienced in it to admiration. When you take this Remedy, it unites itself to the Stomach, and is the same as a flying Mercury, not letting the vapours rise without being mixed with them. It likewise prevents at moist humours from running through the Veins or Nerves, accompaning them until they pass through the pores. Thus it communicates itself and leaves its virtue, notwithstanding afterwards it may be expelled by Urine or Stool.

If you take fifteen Drops of this Remedy after supper, going to bed, it will expell gently all Gravel and Stone without the least incovenience or disturbance; and what we admire most, is that it dissolves at the same time it heals, even inwardly by the eat'er.

Thus we observed and were eyewitnesses how it cured a poor Man, that for Eleven years had suffered the torment of a wound, or sistula, caused by two incisions, which came to such a pitch of corruption that it bred worms, so that the poor Man casting from his Urine such a bad smell, he became very troublesome and was already disposed to do an other Incision, in the space of those few years; it was to be admired how much Gravelly Stone came out of the same wound all involuted together by the way of an imposthume, All whosover doubts of this truth may examine the same Invalid, by name Adolph Cornelisz Jonkhout.

Another sick Man, Abraham van Neer, having been under cure of the most eminent Physicians for upwards of three years, was at last carried to Amsterdam to undergo an Operation so painful that he could not bear it. After he had been for two weeks making use of our Remedy, he was entirely restored to his perfect health.

This Remedy is also very excellent in strengthening the Stomach, and dissolving all thick and billious humours of the same. It is good for all Bruises in the hands or feet, pains of the Reins, Thickness of Blood, all Black and Blue Spots, all kinds of Fevers, and Indisposition of the Stomach, Liver, Loins or Lungs, Asthma, Shortness of Breath, Cough, inward or outward sores and Hysterical pains; it advances the Mences, & facilitates the Urine and Stool, restoring to the face a fresh and wholesome Colour. It cures the Feary, the Dropsy, the French disease, and kills the Worms. All these Distempers are cured by taking fifteen Drops every second day and you may give the Children as many Drops as they have Years of age.

The greatest Pain of Colic that can be, immediately ceases with thirty Drops of the same Remedy.

It is good to mitigate the inward Pains of Children (newly born) giving them one or two Drops of the said Remedy in some Breast Milk.

All lying in Women that find themselves weak or any other kind of Inconvenience, they will find the excellent Effects of this Remedy, if they take it. Sore Legs are cured by the same, as is also the bite of a Dog, with admiration.

Whosoever is affected by Stone in the Bladder let him apply sooner to this Remedy than to the insufferable instruments of Chirurgery, for as soon as you make use of this Remedy, all glebly and vicious matter that sticks to the Bladder, is immediately dissolved, which can plainly be seen in the Urine, appearing in divers figures in the form of Spiders and other Insects; it very often has been seen that the Urine appears congealed like Jelly but this happens when the sick Person has taken this Remedy sometime before for the cause of bloody Urine; this same Remedy expels entirely the Stone, converting it into powder or dust, which plainly can be seen in the settling of the Urine.

Notwithstanding I don't mention in this paper any thing belonging to Fits, or any other Distemper, nevertheless, if any one in this was attacked, let him make use of this Remedy without the least delay; you may safely keep this Remedy free from all corruption fifty Years, so as you have it well stopped.

This is the content of our Medicamentum Gratia Probatum, or the Remedy approved by Grace; but I find no Remedy for those that follow bad Council or advice; nor for those that do not like Medicine; much less for those that seam too delicate in taking it.

MICHIGAN physicians must not neglect to comply with the law providing for their registration, which takes effect September 8, 1883. This enactment, (while it is not what we need exactly) is a step in the right direction, and should be readily complied with. We herewith give a copy of the act:

ACT NUMBER 167, LAWS OF 1883.—AN ACT TO PROMOTE PUBLIC HEALTH.

SECTION 1. *The People of the State of Michigan enact*, That from and after this act shall take effect, it shall not be lawful for any person to practice medicine or surgery, or any branch thereof (except dentistry), in this State without having the qualifications required in the provisions of this act, and without having first registered in the office of the county clerk as provided in this act.

SECTION 2. The necessary qualifications to practice medicine in this state shall be:

(1) That every person who shall have actually practiced medicine continuously for at least five years in this State, and who is so practicing when when this act shall take effect, shall be deemed qualified to practice medicine in this State, after having registered in the office of the county clerk as provided by this act.

(2) Every graduate of any legally authorized medical college in this State or in any one of the United States, or any other country, shall be deemed qualified to practice medicine and

surgery in all its departments, after having registered as provided in this act: *Provided*, That the provision of this act shall not be construed so as to prohibit any student or under graduate from practicing with and under the instruction of any person legally qualified to practice medicine and surgery under and by the provisions of this act: *Provided*, That every person qualified to practice medicine and surgery under the provisions of this act, shall, within three months after this act shall take effect, file with the county clerk of the county wherein he has been engaged in practice or in which he intends to practice, a statement sworn to before any officer authorized to administer oaths in said county, setting forth, first (if he is actually engaged in practice in said county), the length of time he has been engaged in such continuous practice, and if a graduate of any medical college, the name of the same and where located, when he graduated, and the length of time he attended the same, also the school of medicine to which he belongs. And if he is a student or under graduate, the length of time he has been engaged in the study of medicine, and where, and if he has attended a medical college, the name of the same, and where located, and the length of time so attended and when, also the name and residence of the physician under whose instructions he is practicing or intends to practice. It shall be the duty of the county clerk of each county in this State to record in a book provided by the county, the affidavit (or sworn statement) of every physician practicing in said county. For recording each statement the county clerk shall receive fifty cents, to be paid by the person filing the same.

SECTION 3. It shall be the duty of the supervisor at the time of making the annual assessment in each year, to make out a list of all the physicians and each student practicing under the instruction of a preceptor residing within his township, village, ward or city, with the name, age, sex, and color of each, and the length of time each has been engaged in practice, and if a graduate of a regularly established and reputable college, the name of the college and the date of graduation. Such list shall be returned by the supervisor to the township, village or city clerk, and by the clerk recorded in the book in which are kept the records of the local board of health.

SECTION 4. No person who practices medicine, surgery, or midwifery, in any of their branches (except dentristry) shall be able in any of the courts of this State to collect pay for professional services rendered subsequent to the time that this act shall take effect, unless he was at the time such professional services were rendered, duly qualified and registered as a medical practitioner according to the several provisions of this act.

SECTION 5. The supervisor, township, village or city clerk is hereby authorized to administer the oaths required by this act.

SECTION 6. Whoever advertises or holds himself out to the public as authorized to practice medicine or surgery in this State, when in fact he is not so authorized under the provisions of this act, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be liable to a fine of not less than five dollars nor more than fifty dollars for each offense.

SECTION 7. It shall be the duty of the supervisor and health officer of the local board of health in each township, village ward or city, to enforce this act.

Approved June 6, 1883.

CORRESPONDENCE.

PARIS AS A MEDICAL CENTER.

PARIS, July, 1883.

EDITOR OF THE PHYSICIAN AND SURGEON: *Dear Doctor.*—The average floating population of Paris is estimated at about one hundred thousand, and, during three quarters of the year, a large proportion of the strangers are students, who come from nearly every country under the sun to enjoy the opportunities here so freely offered. American physicians I think oftener go to Great Britain or Germany when they find a convenient season for additional study, but I am convinced that they might very profitably spend at least a portion of their leisure here. Having myself thus spent a very satisfactory six months, I take pleasure in recording some of my observations and impressions for the benefit of your readers.

The needs of the sick and poor of this community, of over two million persons, are met by numerous and extensive hospitals and hospices the latter of which correspond to our almshouses. Many hospitals are devoted to special classes of diseases and are richly endowed, and, since all such institutions as well as the various branches of public instruction are controlled by the government, most favorable conditions exist for clinical teaching.

All things which can serve the student in his work are made easily available to him. He has only to show his card, bearing the cherished "M. D." or to say "I am a doctor, or a student of medicine and wish to follow such or such a course," in order to obtain the benefits of hospitals, museums, clinics, laboratories and lectures. If he wish to graduate, some small fees are required, but these are not burdensome, and, without matriculating, he may study as long as he likes and have nothing to pay.

The French language offers but a slight obstacle to his progress. If he have a fair knowledge of the grammar and a tolerably extensive vocabulary, the ear soon becomes accustomed to the sound, and every lecture attended becomes a lesson in French as well as in medicine. Clinical lectures will, naturally, be more readily followed at first, the cases presented to the eye, giving meaning to the terms which the ear is not prepared alone to recognize.

To women, as students, Paris offers peculiar attractions, and contrasts agreeably with London where some of the most desirable clinics are only open to men. Here, however, they will find everything open to them exactly as to their confreres; and, although this condition exists only on account of an accidental omission in the by-laws, and one might wonder if the situation were agreeable to all concerned; the artistically perfect French manners do not permit any dissatisfaction to appear, and I for one have allowed myself to believe that none exists.

Certainly, the eminently liberal policy of the French government; which makes education free and admits to its classes, without partiality, all who seek instruction, deserves our admiration and gratitude.

I have met quite a number of English, Russian, German and American ladies, following the courses and only wonder that there are not many more.

One great difficulty in planning a course of study here is to decide what can be left out with least disadvantage. The clinics of the faculty are, I think without exception, held in the forenoon, and to attend one is to miss several others equally important. This may not be an evil, however, as there is a limit to the rate at which one can assimilate knowledge; and the course at Paris is not arranged with the belief that the science of medicine can be mastered in a few months, or even in the five years of study required before graduation. There are also various supplimentary courses and private clinics which may be attended in the afternoon, and some of these are very valuable.

By choosing wisely, one may study a single subject from various directions, as, for example: the course of M. Charcot on the diseases of the nervous system is beneficially supplimented by the course of his interne, M. Ballet, on the localization of nervous diseases in the brain and spinal cord, and also by another course on the use of the ophthalmoscope in the diagnosis of disease of the brain and the nerves. The latter course includes instruction in the use of the ophthalmoscope and examination of the field of vision and perception of colors; and the student has at his service cases in point, drawn from the large number constantly treated at the Salpetriere. Another course given also at this hospital has for its subject mental disease in its relation to legal proceedings.

The advantage of such a combination is evident and one may with profit become thus temporarily a specialist even if his career is to be general medicine.

In diseases of children the student may follow several courses and among them he will probably find none more attractive than one to be found at the Hospice des Enfants Assistès.

This may be visited every morning at half-past eight o'clock, but the best days are Monday, Wednesday and Saturday. The medical service is conducted by M. Parrot, member of the faculty, and doubtless well known through his writings to your readers.

Several thousand patients are treated yearly in his wards, and consultations for out-patients are also held. Fortunately for the student; and perhaps not less so for the patients, who are often abandoned children, brought into the hospital in conditions from which recovery is hopeless; the dead house is never empty. The lesions of tuberculosis, pneumonia, bronchitis, rachitis, meningitis, syphilis and other diseases are demonstrated almost daily.

M. Parrot has probably made as many antopsies as any man in Paris. He accomplishes them with great celerity, assisted by the younger physicians, and has given to the world some important results of his labors in his writings on hereditary syphilis and rickets.

Students may be present at the autopsies and should by no means fail to do so.

Subjects for dissection and operation may always be obtained here.

The examinations of patients in the wards and at the consultation are very careful and complete. The diagnosis is so accurate and apparently inevitable in many cases, and the symptoms are so clearly defined and so significant when pointed out by the professor, that the student is sometimes inclined to think that he has himself diagnosed the case and to give himself credit for close observation and sound judgment.

Two cases which occurred recently in this clinic will serve to illustrate the kind of material to be found.

An infant of about ten days was brought into the wards during the visit, attacked with convulsions, rigidity so intense that the body was sustained in the horizontal position when lifted by the ankle; jaws firmly locked.

This condition continued for several days with hardly any intermission and the child died.

At the post-mortem the thymus gland was found nearly doubled in size and weight and the foramen ovale only half closed. M. Parrot accounted for the symptoms during life by the coöperation of these two conditions, the communication between the auricles permitting the blood to reach the brain without sufficient oxygenation and the pressure of the thymus upon the great veins of the neck preventing its free return from the cranium.

A second, and somewhat analogous case, was that of a child of eight or nine months in whom a tumor was developed below and in front of the angle of the jaw on the right side and occupying nearly all the space between the jaw and the clavicle.

This patient was also attacked with convulsions which occurred frequently until the pressure of the tumor was removed by operation. The two cases thus seemed to confirm each other, and the coincidence served to fix in the mind a definite idea in regard to the etiology.

It is here that M. Parrot has introduced the use of asses' milk for the nourishment of the infants. He claims for it good results, finding that it more nearly resembles human milk than does that of the cow. His conclusions should doubtless have added weight as the trial is often made upon children who, on account of specific taint, cannot be nursed by a healthy woman. The animals are kept in a clean, light and well ventilated stable closely adjoining the nursery and when the infants require feeding, they are carried to their foster mothers from whom they take the milk with avidity and evident satisfaction.

The little animals are so docile and fulfil so well the functions of wet-nurse that I do not know who shall say that they have not at last found the sphere of their usefulness and, from being the most despised of domestic creatures, may come to rank among the most useful and honored members of society.

Among the clinics on diseases of women that of Prof. Gallard is considered one of the best and is largely attended by students, but I would recommend also that of M. Chiron, which is private, but to which students are made very welcome. M. Chiron has contributed to the better understanding of this class of diseases by his clinical and other investigations, many of which are published in the journal which goes by his name.

The course of Prof. Charcot has been so satisfactorily reported in American journals that I will not attempt to speak of it here, not doubting that all students who come to Paris will hear him at least several times.

Space would fail me indeed to do more than name the many clinics and courses which I have found profitable. I will content myself with mentioning a few clinics of ophthalmology, only stopping in passing to make a suggestion in regard to laboratory work.

The laboratory of the college of France is designed liberally for the promotion of science and anyone wishing to make investigations in physiology or chemistry, may conduct his experiments here, receiving such assistance as he requires in his work. Instruction, however, is not given and persons not qualified for independent research or not having definite ideas of what they wish to accomplish, had better abandon this path of usefulness or go first to other laboratories, of which there are plenty in the city, intended to give preliminary training.

It is not pleasant to hear Americans spoken of as superficial or ignorant because some have made this mistake in regard to the object of these institutions, but I am confident that my fellow graduates of Michigan University, who have made the best use of their opportunities at Ann Arbor, need not hesitate to undertake work in the College of France.

Paris is not lacking in specialists and among them are many oculists of eminence. Passing over the well-known names of de Wecker and Galizowski, I come to Prof. Panas who holds his clinic at Hotel Dieu. On Mondays and Fridays the course commences with the consultation, patients are numerous and the student is allowed to examine them personally and may ask questions of the professor. He is also sometime questioned in turn and may cover himself with glory by his replies if he find himself qualified.

After the consultation, comes the lecture, generally relating to the cases just examined or to those which are to be operated upon in the following hour.

M. Panas employs in favorable cases a modification of the de Graefe operation for cataract, dispensing with the iridectomy. If, after the incision is made and the capsule opened, the iris is found to impose too great an obstacle to the extraction of the lens, it is cut as in the unmodified operation. The immediate results and the appearance of the eye are very pleasing, and so far as I have learned, the cases have done well; but I think the judgment of most oculists would be that the operation with iridectomy is safer.

On Wednesdays the programme is changed. Patients requiring ophthalmoscopic examination have been directed to come on this day; and immediately after the consultation, the large clinic room is darkened, and lamps are placed on the numerous small tables by which the patients are seated. Students may examine as many cases as they wish, and are instructed in the use of the ophthalmoscope and the study of the fundus. Rabbits and artificial eyes are also provided for the use of beginners. I do know that students cannot find a better place than this to begin their studies.

A private clinic which I have found very useful is that of Dr. E. Meyer on "rue Jacob". It is long established, cares for a large number of patients and the fact that students are not numerous is an advantage to those who attend, as they have more time to make examinations, and leisure is of great importance, especially in learning to use the ophthalmoscope.

M. Myer is never tired of explanations which he gives in French, German, English or some other language, to suit the convenience of his audience. The clinic may be attended every afternoon at two o'clock.

Dr. Landolt, Consulting Physician of the National Institution of the Young Blind, etc., is the author of several works on diseases of the eye, among them a complete teatise published conjointly with de Wecker. A smaller "Manual of Examination of The Eyes" translated by Burnett, of Washington, is in use in America, and a larger work is also soon to appear in

English. His clinic, rue St. Andre des Arts, 27, is open to students on Wednesdays and Saturdays, for which occasions many interesting cases are reserved.

One sees here numerous and varied operations performed with skill and almost invariable success.

Among the attractive features of the clinic are the lectures or talks in which the most advanced teachings and the latest discoveries are presented. Various important matters have been discussed during the winter, notably some questions relating to the movements of the eyes, the power of convergence of different eyes and the relation between convergence and accommodation. M. Landolt has sought out many inventions for aiding his observations which seem to me more than usually careful and accurate. One device for measuring the perception of colors is particularly ingenious and satisfactory. A description of it will be found in the manual above referred to.

This clinic is frequented by physicians nearly as much as by students and one is liable to meet here eminent men of Paris and other cities. From the fine abilities, the earnestness and the devotion of Dr. Landolt, we may be sure that his clinic will be in the future as it has been in the past the scene of classic investigations and the source of useful discoveries in the science of ophthalmology. HARRIET V. BILLS, M. D.

TRANSLATIONS.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.
BY RALPH D'ARY M. D., ROMEO, MICHIGAN.

TWO COMPLICATED CASES OF HERNIOTOMY.

BY. W. TH. LINDENBAUM.

It would be difficult to point out a department of surgery that has not been materially improved by the application of Lister's antiseptic method, but the most striking and unexpected results have been obtained in operations penetrating the peritoneal cavity. The liability of this serous cavity to septic infection had always rendered operations within it very formidable, yet within scarcely ten years, abundant clinical experience has accumulated, showing that with strict antiseptic precautions, as introduced by Lister, not only may the peritoneal cavity be penetrated, but even parts of its contents removed with impunity. Operations undertaken for hernia and its complications have therefore also considerably gained as to their results. It is true that even yet we cannot always save the life of a patient suffering from incarcerated hernia, but in these cases the cause of death is gangrene of the intestine *previous* to the operation, or the careless application of the antiseptic precautions, or some error on the part of the surgeon. For the complications met with are as numerous and variable as they are unforeseen, and they cannot be systematically laid down, with rules attached, in works on surgery. Readiness of resource, such as is given only by practice or the careful study of the reports of clinical cases, must be relied on. This is my reason for reporting the following two cases:

Case I.—The peasant, A. A., aged thirty-five, was brought into the hospital twenty-four hours after the incarceration of a right inguinal hernia. Its size was that of a child's head, and as manipulations for reduction, even under chloroform, were unsuccessful, operation was determined upon. The hair of the pubes and along the inguinal regions of both sides was shaved off, as well as on the scrotum and perineum, and all these parts were carefully washed with a five per cent. solution of carbolic acid. The operation was performed from first to last under a spray of a three per cent. warmed solution of carbolic acid. The incisions were made along the longitudinal axis of the tumor, in the direction from the external abdominal ring to the scrotum. The tissues were cut through, layer after layer, until the hernial sac was reached. This was taken up with forceps, an incision was made and it was then carefully laid open with scissors, along a grooved director. The contents of the sac consisted exclusively of a whole bunch of long loops of small intestine, distended to the utmost. Having introduced the left forefinger into the abdominal ring, and then the herniotome along the palmar surface of the finger, the surgeon made several shallow nicks in the constricting band of the ring. Then he tried to reduce the intestine, but all his manipulations remained unsuccessful. He therefore made a few more incisions in the ring and inspected the condition of the intestine at the point of constriction. It was perfectly healthy. He tried again to replace the intestine distended as it was with gas, but handled it so roughly that it suddenly burst. In a moment the contents of the intestine spurted out, covering with a thick coating of liquid fetid feces, not only the whole field of operation, but also the abdomen and thighs.

Having recovered from the momentary confusion into which we were thrown by this disagreable accident, we thoroughly rinsed all the soiled parts with a three per cent. solution of carbolic acid, using for that purpose a common garden sprinkler, and holding it high above the patient. The ruptured intestine was also as much as possible emptied of its remaining contents. Now we had to solve the important question, what was to be done with the injured intestine? Whether to apply sutures, or to enlarge the wound and unite its lips with the abdominal ring? Taking into consideration that the serous coat, although it was congected, yet was not deprived of its epithelium, appeared quite smooth and showed no signs of gangrene, the disease having existed only twenty-four hours, we did not feel justified in exposing our patient to the risks and future inconvenience connected with the formation of a preternatural anus. We therefore resolved upon sutures. The opening in the intestinal wall was closed by means of eight sutures of thin catgut, with the ends cut short. The needle was made to penetrate the serous coat of the intestine at a distance of four lines from the margin of the ruptured wound, was carried for two lines between the serous and muscular coats, then brought out again through the serous coat. In the same manner, but of course in reversed order, it was carried through the corresponding part of the opposite margin of the wound. This suture —Lambert's—insures immediate contact of the serous coat, after the sutures are tied, and favors adhesive inflammation, thereby allowing a firm union of the wound. Even if the intestine should become distended with gas, the little crest formed by the edges of serous membrane, and turned inward into the intestine, is turned to one side and acts like a valve, closing the fisure between the sutures.

Having completed the sutures, we sprinkled some finely powdered iodoform on the wound and for a few centimetres around it and then reduced the hernia, which was now done in a few seconds. The external wound was sewed up with silk, and a short drainage tube was inserted into both corners. Then it was covered with iodoform gauze, with absorbent cotton, and with rubber cloth. Finally all was secured with many turns of starch bandage, not only over the loins, but also the hips and pelvis.

When admitted into the hospital the patient had had a thready and frequent pulse, and vomiting. After the operation the pulse soon became normal, the vomiting ceased and the patient felt comfortable. At first he was kept under constant surveillance. During the first two days he was given nothing but a little cold water; on the third day he was allowed some milk, which was his exclusive nourishment for a whole week. On the fourth day he had the first action of the bowels, without injection. During the first days the temperature rose as high as 38°, but it soon returned to the normal point. Subjective symptoms were not distressing:—there was only slight meteorismus and pain in the abdomen. Every five or six days the bandage was removed. Cicatrization proceeded satisfactorily and recovery was only delayed by the formation of a hard tumor in the scrotum, which was only very slowly re-absorbed.

Five weeks after the operation the patient was dismissed completely cured.

There is no doubt that accidents such as the rupture of a non-gangrenous intestine have happened to the best of surgeons, and it would be unsafe to conclude that the contrary, was the case simply because there are no descriptions of them extant. For such accidents are generally quite willingly passed over in silence, by those to whom they happen. In our case I ascribe the favorable termination and the entire absence of peritoneal symptoms, after so dangerous a complication, to the general antiseptic precautions taken and also to the application of iodoform.

During one year of a pretty extensive surgical practice I have gathered many facts showing that iodoform cannot be superseded by anything in those cases of operations on the intestines and within the peritoneum, where strictly typical Listerism cannot be applied.

Case II.—A. D., a small trader, aged forty years, of strong constitution, was brought into the hospital two days after incarceration of an ingninal hernia. The pulse was frequent, thread like; the extremities were cold, defecation was impossible, and he was continually vomiting the fluid fetid contents of the intestines. Repeated attempts at reduction, under chloroform, were unsuccessful. During the operation it became apparent that the hernial tumor consisted almost exclusively of omentum, containing only a small loop of the small intestine. This was of dark purple color, but not gangrenous. Having enlarged the ring by means of small nicks, the loop of intestine was first reduced and then attempts were made to reduce the omentum, but its friable adipose tissue only kept breaking down under the finger, and the omentum did not move. We therefore abandoned the attempts at reduction and proceeded as follows: The neck of the omental tumor was divided into three bundles, each being secured separately by double ligatures of stout catgut. The latter were cut off short. The protruding omental tumor was then cut off. It weighed about two pounds (twenty-eight ounces American weight). The three bundles, or pedicles, were sprinkled with iodoform and then carefully replaced, one by one, through the adbominal ring. This was now accomplished without difficulty. Having thus got rid of the hernia, I proceeded to the second step of the operation, which was intended as a preventive of a future re-occurrence of hernial incarceration. The neck of the hernial sac was drawn slightly outward, by means of two forceps, and was separated from the adjacent tissues by means of the ends of the fingers. It was then surrounded with a strong carbolated catgut ligature and the latter securely tied. Then the margins of the lower (or distal) part of the hernial sac (which of course had been opened at the beginning of the operation) were united by separate catgut sutures with the margins of the integumental wound, in the manner proposed by Volkmann for hydrocele. Altogether fifteen sutures were applied. A drainage tube was inserted into the lower corner of the wound and then iodoform with the usual bandaging was applied.

After the operation the vomiting ceased at once; the first defecation occurred in twenty hours; the temperature rose to 38° only on the second and third days and then subsided again. The lips of the wound separated slightly, but the pus was laudable and the patient's condition continued satisfactory. In five weeks there was a firm cicatrix. At the present time, namely, nine months after the operation, even during the severest straining, there appears only a tumor of the size of a walnut at the abdominal ring, whilst during the twenty years preceding the operation no kind of truss was of any use in preventing the protrusion of the hernia. The patient is now able to lift two and three poud (a poud equals thirty-five pounds) without inconvenience.—*Vratch.*

REMARKABLE CURE OF VOLVULUS.

BY L. BOGDANOF.

The peasant, M. B., was brought into the hospital on the 8th of November last. On the morning of the 3rd he had felt in excellent health, and had eaten his usual dinner with relish. But in the evening he had felt such severe pain in the abdomen that he went to bed. From that day he had had no action of the bowels, although he had been actively treated with clysters and cathartics by his friends. Everything that he swallowed was immediately vomited. On the second day feces made their appearance in the vomit, and also a lumbricus. The pain continued in periodical attacks.

On his admission we found B. in the following condition: He was ashy pale, the mucous membrane of the lips, the end of the nose and the finger tips were slightly cyanotic. The eyes were sunken, the face expressive of suffering. The tongue was dry, but coated with a yellowish fur. The extremities were cold. The pulse was small, 88, temperature slightly lowered. Breathing was superficial, 28 per minute, thoracic (or costal). Percussion showed that the diaphragm stood high. There were no complications. The abdomen was tense and meteoric, and everywhere gave a low pitched tympanitic sound. But there was a dull area just above the ilio-eccal region. There was no fluctuation; it was impossible to feel any of the internal organs. Deep pressure elicited dull pain. On the right side the hand met with resistance, and the dull spot was painful. Much borborygmus. Occasionally a loop of intestine would so much raise the integument as to reveal its own outline. There was no hernia. Palpation per rectum revealed the intestinal loops hard and tense as cords. He had fecal vomiting. As the quantity of water injected and retained often is a valuable means of ascertaining the location of the obstruction, we used a long tube, attached to a syringe, and injected three literes of water ere it began to return.

The above data left us no doubt that we had to deal with complete impermeability of the intestinal canal. There remained now to be determined the anatomical cause, and exact location of the trouble. As in the majority of such cases, we could not arrive at very exact results. But that the obstruction was not due to fecal masses was evident from the fact that such accidents generally happen to people who are habitually costive. This had not been the case with our patient, in whom we could not even find any scybala on digital examination per rectum.

As the patient had never had peritonitis there was no reason to suppose that there was intestinal constriction by band of false membrane formed in consequence of inflammatory fibrinous exudation. Such constrictions also run a much shorter and severer course than our patient's case, and collapse in them takes place very soon. For the same reasons we excluded incarceration in folds or fissures of the omentum or mesentery.

Neither did it appear likely to us that invagination was present, because there had been no derangement of digestion. Neither could we feel an oblong sausage-like tumor; nor had the patient passed any bloody mucus per anum.

Thus by way of exclusion we arrived at the diagnosis of volvulus, located in the ascending colon. The location was indicated by the dull area, the hardness and sensitiveness on pressure, and the quantity of water that could be injected before it returned—three liters.

We gave the patient three clysters every day, injecting about the above quantity every time, also one grain of opium three or four times a day, ice to suck, cold compresses to the abdomen. Once we tried faradic electricity. The treatment was continued a whole week, but without result, and the patient's condition had become so desperate that we proposed surgical interference. This was on the twelfth day of the patient's illness.

Before resorting to this extreme measure, however, we resolved to try the following foaming clyster: We dissolved one-half ounce bicarbonate of potash in one and one-half litres of water; also, separately, two drams tartaric acid in the same quantity of water. Then we put the patient a la vache (knee chest position) and injected first the alkaline and then the acid solution. The effect exceeded our expectations. In ten minutes the patient felt a strong call to stool, without pain, and passed the fluid, but it was colored brown and had a fecal odor—for the first time in twelve days. At the bottom of the vessel were found granular scybala. He immediately felt some relief. The clyster was repeated in two hours, and brought away a few scybala of larger size. On the third day the clyster brought away scybala of the size of a walnut. The meteorismus diminished, and he now easily retained his food. A week later he had voluntary defecation, and began to rally materially. Still five days later we called him well.

The above case evidently owed his recovery to the development of carbonic acid gas in the intestine, for the same quantity of plain water had been injected twenty-one times without success. We publish this case because the great majority of authors whose works are within our reach, do not mention this remedy at all. Leichtenstern alone mentions it, in passing, as a remedy proposed by Richelot and Guyon, but condemns it as causing too much peristaltic action, and therefore having the effect of a cathartic. Our case shows that this objection on theoretical grounds, is not important.—Abbreviated from *Vratch:*

CLINICAL REPORTS.

GLEANINGS FROM ANN ARBOR CLINICS.

Reported by GEO. F. HEATH, M. D.

SURGICAL CLINIC AT UNIVERSITY OF MICHIGAN.

BY DONALD MACLEAN, M. D.,
Professor of Surgery and Clinical Surgery.

FROZEN FINGERS.

William M., age forty-two. Admitted to the hospital February 10, 1883. Mr. M. is a Swede by birth, but eight days ago indulged in the prerogatives of a free American citizen, and lay out in the snow for five hours on a bitter cold night. When found, the fingers of both hands were frozen and his thumbs and one great toe considerably chilled. His hands were immediately packed in snow and since then he has kept them annointed with linseed oil.

At present, fingers are of a dark color, much swollen, and give a very disagreeable odor. He has been a hard drinking man and is affected in arms with paralysis agitans to a slight degree, suffers considerable pain, and cannot bear the slightest draft of air on his fingers.

Soothing poultices of linseed meal and charcoal were ordered until the lines of demarkation should form. Morphia to relieve pain if necessary.

February 17: The lines of demarkation having distinctly formed, an anæsthetic was given him and the following amputations made, namely: Right hand; first, third, and fourth fingers, at second phalangeal joints and second finger at first phalangeal joint. Left hand; first finger at second phalangeal joint and second, third, and fourth fingers at phalangeo-metacarpal joints. An effort was made to provide for flaps when possible, otherwise were left to heal by granulation. No hemorrhage of importance.

February 20: Patient had considerable pain first night, relieved by morphia, since then has been doing well, has sworn off drinking.

March 7: Wounds nearly healed, will have considerable use of hands, is able to use them now to feed himself.

March 10: Dismissed, cured.

EXCISION OF SCAPULA.

Mrs. Jane H., age fifty-one, admitted to hospital January 5, 1883. Presents the following history: Always been a hard-working woman and up to about a year ago enjoyed usual good health. At this time took a severe cold which was followed by pneumonia; from this she speedily recovered, but shortly afterward noticed a lameness in the right shoulder accompanied by severe pain. She thought it was rheumatism and applied poultices, blisters and linaments with no relief. A few weeks later noticed an enlargement on the right scapula, extending around into right axilla. This growth has continued to increase in size and has caused her much suffering, resulting in seriously impairing her health. She has used various remedies, external and internal but with no relief, and now presents herself for surgical treatment.

Examination showed a firm hard tumor over right scapula, closely adherent to it and extending from the inferior angle, filling most of infra spinous fossa, involving whole axillary border and passing through the axilla to the arm. The whole mass immovable only as the scapula moved with it.

Professor Maclean considered the tumor a sarcoma, either a spindle or round celled, possibly from its bony feeling, a stenoid or myeloid variety, but of whatever variety the correct treatment was the same, the excision of the tumor with a portion, and possibly the whole of the scapula, depending upon the extent of the disease and its malignancy. Owing to age of the patient and her enfeebled condition, his inclination was not to interfere with the case, but upon the entreaties of herself and friends finally consented.

January 13: Anæsthetics was given, chloroform soon changed for ether. A T shaped incision was made over the scapula; the horizontal extending along the direction of spine of scapula about five inches, and the downward incision about six inches. The flaps were then dissected back exposing the muscles. The subscapular and posterior scapular arteries were then dissected out and secured, also the long thoracic artery and vein with several other minor branches. The tumor was then exposed and found inseperably attached to scapula and involving adjacent tissues the scapula itself being found in a degenerating condition and the disease so far advanced that it was necessary to remove all the scapula, with exception of acromion process. The head of the humerus was found involved in the mass and in a degenerating condition, and was exsected with about an inch of the shaft. Very little blood had been lost during the operation, the wound was cleansed and closed by silk and horse hair sutures. The dressings consisted of oil silk and sheet cotton held in place, together with the right arm, by roller bandages. Whole time occupied, forty-five minutes.

The patient suffered considerably from the shock; at 7 P. M., temperature 101¾, pulse 112, was given one-sixth grain morphia hypodermically, and passed a comfortable night. In the morning expressed herself as feeling very well and no complaint of pain; at 8 A. M, temperature 102½, pulse 120, during the forenoon had a slight chill followed by free perspiration, but felt better about noon; took some nourishment but not borne by the stomach. A little later began to grow worse, and in spite of all that could be done sank rapidly, dying at 4 P. M.

On postmortem examination four large fibrinous clots were found in heart extending into aorta and pulmonary veins, three calculi about size of chestnut were also found in the gall bladder. Other viscera, normal.

The tumor on microscopical examination proved to be a round celled sarcoma, the cells each containing several nuclei, the growth probably originating in the periosteum of the scapula.

STONE IN BLADDER.

Lillie B., aged seven. Admitted to hospital March 21, 1883. Her parents give the following history: She has had what they call a "weakness" of the urinary organs since a babe. About four years ago, for four weeks, pain was so severe on micturition as to cause her to cry out. These symptoms subsided after treatment by home physician.

Nine months ago she took a severe cold and has had trouble with urinary organs ever since, accompanied by severe pain particularly on passing water. From September to December last passed considerable blood and pus with urine, since then has used a vessel containing a hot infusion of smart weed with some little relief. Has passed no blood but the pus still continues in the urine. Has had internal treatment, consisting of iron tonics and diuretics but of no avail, she has continued to get worse and for over six months she has been obliged to resort to opiates to relieve her, to some extent, of her suffering.

At times she has had fever, is very nervous and irritable, occasionally gives a hysterical cry: She cannot walk for pain, but sits and sleeps, Turk fashion, with legs drawn up and thighs abducted; drinks considerable water, but voids only the usual quantity of urine, suffers also at present from incontinence, never has had a local examination.

March 25: An anæsthetic was given her and careful examination made, external genitals inflamed and swollen, a probe was introduced into the bladder and came into immediate contact with a calculus. The urethra was dilated by introducing the the blades of straight dressing forceps and then opening them *in situ*, the stone was grasped with the same forceps and withdrawn with some difficulty after lacerating the parts. Considerable debris of stone attached to walls of bladder were then removed by forceps and the bladder washed out.

Great relief was afforded at once. She was put upon a milk diet and advised to drink considerable barley water; bladder to be washed out twice daily.

March 29: A piece of stone size of pea washed out. The irritation of the tissues rapidly subsiding.

March 31: An anæsthetic was again administered and a piece of stone about size of hazel nut removed, also some debris washed out. A careful search with sound failed to find any more. From this date she rapidly improved in health. In ten days she was up and walking about the ward, and on April 14, twenty days from date of her first examination went home cured.

In July last her parents wrote Professor Maclean that she is as well and smart as any girl of her age, and the picture of her enclosed does not belie their word.

The removed stone was acid in formation, was one inch long, three-fourths of an inch wide, and seven-sixteenths of an inch thick, very ragged and irregular, the fragments saved weighing between four and a half and five drams. Considerable was lost in washing out the bladder.

FOREIGN BODY IN NOSTRIL.

John J., age twenty-seven. Admitted to hospital January 27, 1883. Last October while at work in a saw-mill, a piece of slab was thrown by the saw striking him on right side of face, opening up the right nostril, fracturing the malar bone and destroying his right eye. A physician was called who dressed the wound stitching the flap from the cheek to the nose, and enucleated his eye. He soon recovered, but has been annoyed ever since bv a disagreeable discharge from the nostril, of a very offensive odor, accompanied at times by small fragments of hemlock bark. He thinks there is still a portion of bark in his nostril, suffers constant pain, and thinks his health is being impaired in consequence.

January 31: Professor Maclean made an examination of nostril and with polypus forceps removed several small fragments of bark.

February 3: Irritation having somewhat subsided, another effort was made to remove the obstruction which soon resulted in the dislodging and removal of a piece of hemlock bark, one and a fourth inches long, five-eighths of an inch in width and a half inch in diameter. It had been situated at the base of the nose among the tubinated bones. Fragments of these bones necrosed, were also removed.

February 17: The discharge from nostril nearly ceased and less offensive, is feeling much better and was dismissed. In June he writes that he had no further trouble after leaving the hospital.

SELECTED ABSTRACTS.

DANGER OF ERGOT IN LOCOMOTOR ATAXY.

Professor Grasset (*Le Prog. Med.*, 1883, Number 1) records a case of locomotor ataxy in a man aged thirty-eight, who was getting on pretty well until another physician saw him and prescribed in doses gradually rising to fifteen grains daily. On the second day on which the full dose was taken he became paralyzed in all four extremities with loss of voice. On omitting the ergot he recovered slowly. Dr. Grasset recalls the recent observations of Tuczek in an epidemic of ergotism, that all the cases presented symptoms of a lesion of the posterior columns of the spinal cord, and in some cases the complete picture of locomotor ataxy was developed.—*The Practitioner.*

EXCISON OF HUNTERIAN CHANCRES.

The question of the value of excision of true Hunterian chancres possesses considerable pathological as well as practical interest. If the operation prove of no avail the conclusion would be favored that at any rate until the nearset lymph glands are infected, the poison is entirely local: While if it fail even when performed quite early, it rather points to the conclusion that the virus is quickly disseminated, although it most rapidly sets up peculiar changes at the time of inoculation. Thus far the evidence is contradictory, or at any rate not conclusive. Nearly all the surgeons who practice the operation are agreed that to be successful it is essential that the chancre should be excised before the lymphatic glands are infected; the number of cases in which this can be done is not large, and the difficulty of coming to a precise diagnosis of a chancre in this stage is best realized by those who have had most experience in this department of surgery. Dr. Oscar Lassar, of Berlin, has performed the operation forty-eight times. Where the chancre is superficial he removes it with a single cut of the knife or scissors; where it is deep or situated on the glans penis he used a sharp spoon. He then closes the wound with catgut-sutures and fastens on an iodoform dressing. Generally he has succeeded in getting healing by first intention, but if any induration occurs around the wound this is again removed in a similar manner. Of thirty-seven cases thus treated within the last four years nineteen must be excluded from consideration as the subsequent course was not thoroughly known. Of the eighteen which have been well followed up, thirteen passed through the usual stages of constitutional syphilis but in no case was the attack severe. Five cases escaped all general infection, and Dr. Lassar states that in no one of these cases had he any doubt of the diagnosis at the time of the operation. He contends that as the operation is not a serious one, and inflicts no real injury upon the patient, and while there is no other known way of preventing constitutional infection the operation is justifiable in suitable cases, even if only twenty per cent. of the patients are cured by it.—*The Lancet.*

WOUND OF VAGUS NERVE.

The following case is of interest in relation to the question of the possible effects which may follow division of the par vagum on one side of the neck. The patient was a man aged forty-nine years, the subject of a tumor in the neck of long duration, which, in the course of eight weeks, rapidly increased in size, induced much pain, and was associated with marked emaciation. The tumor occupied the left side of the neck, displacing the larynx to the right; it was of the size of two fists, but little movable, and was crossed by large veins. No sign of pressure on the vessels or nerves were detected. The lungs yielded no physical signs of disease. Notwithstanding the connections of the tumor its removal was decided upon. The internal jugular vein, being adherent to the tumor, was ligatured and divided. The vagus nerve being much displaced was divided. Later on in the operation the nerve was again cut through, so that a portion of it about six inches long, was removed. After the operation the pulse was one hundred and twenty. Some rales could be heard in the left lung, and the left vocal cord was paralysed. Six hours later the pulse was ninety; the respirations were thirty. After this the patient did fairly well till the tenth day, when fever set in; and on the twelfth a rigor occurred, which was repeated the next day. The patient died on the fourteenth day, only a little purulent sputa having been coughed up. At the autopsy some broken-down blood-clot was found at the site of each ligature on the internal jugular vein, but not an extensive thrombosis. The muscles of the left vocal cord were already in a state of fatty degeneration. In the bronchial tubes of the left lung only purulent matter was seen; the right lung was œdematus and congested but there was no bronchitis. Dr. Reidel who had performed the operation, regarded the unitateral bronchitis and disease of the left vocal cord as directly dependent on the removal of the large piece of the left vagus nerve in the neck. The pyrexia and rigor which ushered in death were looked upon as probably of embolic origin. though there was no post-mortem evidence to substantiate this view.—*Medical Times and Gazette.*

ARTICULAR GANGLOIN.

There is still some difference of opinion as to the nature and mode of origin of the cystic tumors common on the wrist and ankle, usually known as ganglia. What evidence there is on the point not merely connects them with the synovial sheaths of tendons in many cases, but indicates that at any rate in some instances they are the results of hernial protrusions of the synovial lining of these sheaths through the fibrous covering. The original communication between the cyst and the sheath is usually early closed, but it may remain patent. It is, however, to another mode of origin of these synovial cystic tumors that attention is now called—to those originating in hernial protrusions of articular synovial membranes. These have long been known to exist, but they have been studied more in France. They not only form a certain proportion of the ganglia common at the wrist and on the dorsum of the foot but they occur in connection with other joints, and it is this fact which is apt to be overlooked. Such hernial protrusions when attaining any size form tumors over or in the near neighborhood of joints of varying depth; they have a narrow pedicle leading into the joint cavity and upon this fact depends their importance, for surgeons are tempted to remove or otherwise operate upon these apparently simple tumors, and, unless special precautions be taken, grave and even fatal results may follow from acute articular inflammation. Of the larger joints these ganglia are more often connected with the knee than any other, then the elbow, and it is to be especially remembered that their pedicle may be long as well as fine, and their connection with the joint anything but apparent. Usually unilocular. M. Nacaise has recently recorded an instance of a multilocular articular ganglion on the outer side of the knee-joint. It was stated by Cloquet that they could always be recognized by the fact that the swelling was reducable into the joint by pressure. Such may be the case, and is of course, a valuable sign, but occasionally, the communication between the two is so imperfect that pressure of the cyst does not empty it, the case of M. Nicaise's just alluded to is one in point. The great practical point, is to remember, when called upon to treat any cystic or circumscribed tumor about the joint, the existence of these tumors, and to treat all such as if they did communicate with the joint, and even though there may be no distinct evidence of this before the operation. There have been several instances in which such tumors have been excised inadvertently and fatal arthritis has been set up.—*Lancet.*

INTESTINAL ABSORPTION.

A novel account of the process of intestinal absorption has just been offered by Dr. Zawarykin, a Russian observer—so novel, indeed, and curious that it can hardly be seriously discussed. Every one knows of the attempts that have been made to account for the entrance of fat into the lymphatics of the villus, and will remember the descriptions that have been given of the epithelial cells covering the mucous membrane which are supposed to be specially provided with pores for absorbent purposes. Dr. Zawarykin's process of absorption as evolved by him from the study of histological specimens from different periods of digestion, is much more beautiful, and indeed, more simple than this. He draws a picture of the leucocytes of the mucous membrane, making their way "up" to the epithelium, pushing an arm-like process out between these cells, taking up a little load of fat, and then hastening "down" with it, to fall into the central lymphatic of the villus. If any thing can add to this picturesque description, it is the account of the briskness and activity of the leucocytes as they run up and down on their outward and return journeys. Protoplasm is becoming more than powerful—it is getting positively clever.—*Medical Times and Gazette.*

CHOLERA.

A leading European journal asks its readers the question: In view of a possible, but we may still hope not very probable, invasion of cholera, it may be worth while to ask ourselves, seriously and urgently, in what condition will that formidable epidemic disease find us as regards the facilities provided for its rapid extension? That question is as applicable to this country as it is to England. In the history of previous epidemics there can be no doubt we may trace the record of progressive limitation and repression by sanitary improvements. The time has now arrived when, with our light and knowledge, we ought to have no great dread of cholera. It is, in a very special sense, a perfectly controllable *in*fection, but it must be understood that it is not so contrlolable as an *af*fection. It remains to be seen whether medicine, as a healing art, has discovered any new remedy or learned to apply any known and tried, but not perhaps thoroughly understood, principle of therapeutics in relief of the malady. Medicine, as a preventive art, in its dealings with the germs of disease, ought to be able to grapple instantly and successfully with cholera. Being propagated solely through excreta, water is the great carrier of the infective germs. Obviously, if the excreta of a cholera patient are allowed to dry in contact with the air, these germs may float away in the atmosphere, and the air will then become infected; but in a primary sense it is the water that should receive special attention. In any case, it has been demonstrated that, provided all the excreta from a cholera patient are instantly destroyed—not merely disinfected—the disease will not spread. The malady can no more develop *de novo* than a plant can grow without seed. It is of no use waiting until the disease has effected a lodging. If choleraic dejecta have passed into the sewers before the nature of the disease has been recognized, as is most likely to happen, the seed has been already sown broadcast, and the production of a crop of cases in some localities, although it may be seemingly far from the first case, will be inevitable. The only effectual safeguard against the epidemic we desire to avoid is to begin at once to destroy *all* diarrhœa stools, lest too late they may be found to have been choleraic! As a matter of precaution we ought always to destroy the stools of fever and diarrhœa. It is wanton recklessness to allow them to pass into vaults or sewers. This is how disease is spread and perpetuated when it should be stamped out. Whatever disinfectant that is employed should be used at once and of strength sufficient to accomplish the object in view.

DISINFECTANTS.

The *British Medical Journal* of June 30, contains a short article from Dr. W. E. Buck, in which he states that he has used the whole round of disinfectants for cancerous ulcers, but all have failed in allaying the fœtor and keeping the ulcer clean. The disinfectants tried were carbolic acid, samtas, terebene, resorcin, creosote, boroglyceride, chloride of lime, charcoal, etc. After failure of these he tried a saturated solution of hyposulphite of soda, added to an equal part of water, and found it exceedingly efficacious. The ulcerated surface was well syringed and washed with the solution, and was then covered with lint steeped in the solution. The granulations were kept clean and the fœtor was well kept under.

In his experience most disinfectants seem to lose their virtue after a few days' application, but this one was used for months in the same patient with continuous good effects. It is cleanly, has no odor, does not stain, and is very cheap.

CASCARA SAGRADA IN CONSTIPATION.

In an article to *The British Medical Journal*, Dr. Lithgow, says, cascara sagrada seems to act as a tonic to the pneumogastric and sympathetic supplies of the *primæ viæ*, aiding the general processes of digestion, whilst especially promoting those of nutrition and assimilation. At the same time it so influences the secretory system as to increase deficient and to improve and restore vitiated secretions, by regulating the proximate action of visceral and intestinal glands. From this it will be seen that its use is especially indicated in cases characterised by torpidity of the liver and an atonic condition of the stomach and bowels.

Where habitual constipation depends upon derangement of the intestinal glands, with consequent defective or perverted biliary and intestinal secretions, associated with an adynamic condition of the muscular and nervous forces of the alimentary canal—involving congestion of the portal circulation, and also of the gastro-intestional mucous membrane—the action of cascara sagrada, will be found most satisfactory, the writer has repeatedly known it to succeed in relieving and regulating the bowels when all other usual remedies had failed.

In his experience Dr. Lithgow has seen no reason to withhold its use in any case of habitual constipation of a functional character, even in those occurring amongst children, but finds that it acts differently in different individuals, some requiring more and others less; in some producing griping pains, while in most cases its action is quite painless. Symptoms of tenesmus can, however, be readily obviated, either by limiting the dose or by combining some suitable antispasmodic with the active agent.

In the numerous cases in which chronic constipation is associated with hemorrhoids, cascara sagrada is of especial service, as its efficient action as an aperient relieves the venous congestion; while instead of irritating, as many cathartics do it seems to exercise a soothing effect upon the rectal mucous membrane.

The author finds that small doses frequently repeated, are more satisfactory than large doses, and this is what might naturally be expected from the physiological action of the drug. When chronic constipation is complicated with flatulent dyspepsia, deficient gastro-intestinal secretion and impaired muscular tonicity of the bowels, ten to fifteen drops, three or four times a day, either before, with, or immediately after meals, will be found to give the most gratifying results. Cascara sagrada has no tendency to produce undue local or systemic disturbance, such as nausea, tormia, impaired appetite or eructations. In fact, he thinks no therapeutic agent so reliable and satisfactory in the class of cases to which he alludes.

PHTHISIS, BRONCHITIS AND PNEUMONIA: ARE THEY EPIDEMIC DISEASES?

The above is the subject of a paper read by Dr. Longstaff before the Epidemiological Society of London, in which the following conclusions were made:

(1) That the mortality statistics of England and Wales did not give any evidence in favor of the view that phthisis is communicable; but they showed, on the other hand, that weather had very little influence on the phthisis death-rate.

(2) That while bronchitis and pneumonia were both greatly influenced by meteorological conditions, it was difficult to explain, by those conditions only, all the pneumonia.

(3) That common catarrh was a communicable disease and that it was probable that many cases of bronchitis and pneumonia might be looked upon as complications of that or some similar disease of mild character when uncomplicated.

(4) That the different incidences of bronchitis and pneumonia on the two sexes pointed to some difference in the causation of the two diseases.

(5) That there would appear to be some common factor in the causation of phthisis and tubercular meningitis.

THE VALUE OF VARIETY IN DIET.

Variety in human diet is much more than a matter of taste; it is one of high nutritive value and one which cannot be neglected if health is to be preserved. While authorities are pretty well agreed as to the composition and relative qualities and quantities of the proximate dietetic principles which are necessary for the sustenance of life, experience has shown, by clear and numberless proofs, that it is not enough to furnish a man with alimentary substances in scientifically accurate combinations and proportions. Without variety in food, at least in civilized communities, nutrition is sure sooner or later to fail. To maintain the nutrition of the body in full perfection it is an absolute necessity that due variety must be introduced into the dietary scale. As Dr. Parkes long ago pointed out, different substances of the same class must be alternately employed. He wrote:—"Sameness clogs; and with a variety more food is taken, and a larger amount of nutriment is introduced." Carried to a certain point, uniformity in diet is good, as, for example, in the hours of feeding, and in the characteristic features of the respective meals. In these points, to live by rule tends to preserve the assimilative processes in healthy vigor. But absolute uniformity in the composition of meals is bad, however excellent the dietetic substances employed. Nature furnishes us with food of similar, but not of identical composition, in endless variety. The good effects of variety in diet are to be found in its action on primary digestion. Change is grateful to the stomach as well as to the palate, and gives a gentle and natural stimulus to assimilation. Where it is difficult to give any great variety to the composition of meals, much of the good of dietetic change may be secured by giving an artificial variety to foods by judicious use of the different modes of cooking, dressing meats and dishes suggested by the culinary art. The same meat may furnish some of the charm of change according as it is roasted, stewed or boiled, and the same flour may yield various foods, as it is made into different forms of bread, cakes, and puddings. With respect to the value of variety of food, as in so many other important sanitary questions, children furnish us with delicate tastes. It has been shown over and over again that a great improvement in the health of schools coincides with the maintainance of a various as well as a liberal *cuisine.* In increasing attention to securing variety in the kinds of cooking of food for the young, has often been found the correction of bad health in the inmates of seminaries.—*British Medical Journal.*

THE EFFECT OF TOBACCO ON CHILDREN.

Dr. G. Decaisne has submitted to the Society of Public Medicine, the results of some interesting observations concerning the effects due to the use of tobacco among boys. Thirty-eight youths were placed in his charge, whose ages varied from nine to fifteen, and who were in the habit of smoking, though the abuse of tobacco varied in each case. The effects, of course, also varied, but were very emphatic with twenty-seven out of the thirty-seven boys. With twenty-two patients, there was a distinct disturbance of the circulation, bruit at the carotids, palpitation of the heart, deficiencies of digestion, sluggishness of the intellect, and a craving more or less pronounced for alcoholic stimulants. In thirteen instances there was an intermittent pulse. Analyses of the blood showed in eight cases a notable falling off in the normal number of red corpuscles. Twelve boys suffered frequently from bleeding of the nose. Ten complained of agitated sleep and constant nightmare. Four had ulcerated mouths, and one of the children became the victim of pulmonary phthisis, a fact which Dr. Decaisne attributed to the great deterioration of the blood produced by prolonged and excessive use of tobacco. As these children were all more or less lymphatic it was not possible to estimate a comparison according to temperament; but of course the younger the child the more marked were the symptoms, and the better-fed children were those that suffered least. Eight of the children in question were aged from nine to twelve years. Eleven had smoked for six months, eight for one year, and sixteen for more than two years. Out of eleven boys who were induced to cease smoking six were completely restored to normal health after six months, while the others continued to suffer slightly for a year. Treatment with iron and quinine gave no satisfactory results, and it may seem tolerable evident that the most effective, if not the only cure, is to at once forswear the habit, which to children in any case is undoubtedly pernicious.—*London Lancet.*

INJECTION OF CARBOLIC ACID IN NEURALGIAS.

Dr. Schrumpf publishes in the *Gaz. Med. de Strassburg* an account of the success which he has met with from the hypodermic injection of carbolic acid in seventeen cases of sciatica, lumbago, cervico-brachial neuralgia, pleurodynia and muscular pains. Pains which have lasted for weeks or months are soon relieved, sometimes by a single injection and at others by four or five and never requiring more than nine injections. The usual dose was three centigrammes, but in obstinate cases this was doubled or trebled; and Dr. Schrumpf believes that much larger doses may be employed with impunity. He has never found any ill effect result from the injections, but they are only useful in idiopathic neuralgias, and not in those which are due to spinal diseases, compression of nerves or deeply seated varicose swellings.—*Med. Times and Gazette.*

TREATMENT OF SYPHILIS AT VIENNA!

The *London Lancet* takes the following from a communication to the *Canada Medical Journal.* The general hospital of Vienna contains four hundred beds for syphilitie patients. Prof. Neumann has recently succeeded the late Prof. Sigmund, but the treatment pursued is essentially that of Prof. Sigmund whose efforts did so much to give this branch of the medical school its celebrity.

(1) Treatment of the local sore. The term *hard* chancre is now never used, as an infecting sore may be either *hard* or *soft.* The mineral acids or the thermo-cautery are never used for its destruction. The removal of the infecting sores by the knife or scissors has been given up, for it was never found effectual in preventing infection. When there is an ulcerating surface, iodoform is invariably used in the form of spray (one part being dissolved in six of sulphuric ether). This leaves on the surface a fine coating of iodoform, which adheres well to the surface. After a few days' use of this, when the granulations are healthy a two per cent. solution of carbolic acid is substituted.

(2) *Secondary Symptoms.* It is considered that there are no known means of preventing these. The treatment of the secondary stage is not commenced until the particular form that it assumes is evident. If the patient has an excellent constitution and

good appetite, it is not considered necessary to give him iodine or mercury, good health and appetite with strict attention to cleanliness being regarded as sufficient. During the two or three years that this stage is supposed to last, the patient has two or more relapses, and as a relapse is always more difficult to get rid of, it is recommended when the first attack of secondary symptoms is slight not to give iodine or mercury, but to reserve these agents for a later period; for if they are used for the first crop of secondary symptoms they will be found to have much less effect on the second or third crops than if they had not been used for the first. Moreover if iodine is used for the treatment of the second stage of syphilis it will be found to have much less effect than mercury over the tertiary symptoms, and if mercury is used in the secondary stage it will have less influence over the third than iodine. As a rule the practice is to give iodine during the secondary stage when the symptoms are of a pronounced character. If they do not yield or the iodine is ill borne, then mercury is given. Mercury is also given if the case is a particularly severe one. Iodine is considered to be as useful during the secondary as it is during the tertiary stage. Whatever preparation of iodine or mercury is used, it only does harm as digestion is materially interfered with. This is a point of great practical importance and one too often neglected. In scrofulous and tuberculous patients it often happens that neither treatment has good effect until iron or cod-liver oil has been taken for some time. The rule generally followed is to give the iodides in the moist, and mercury in the dry secondaries. It is found that dry eruptions always occur in the weak and badly nourished, while the moist occur in the strong and well-nourished.

(3) *Administration of Mercury Inunction* is the method most commonly employed, as by no other means can the system be so quickly influenced. In gummata of the nasal septum, roof of the mouth, etc., when hours are precious in order to save the hard tissues from destruction it should always be used. The preparation generally used is a finely divided ointment, made up of one part of mercury to two of lard. A piece not larger than a pea is rubbed slowly in until the parts are dry, half an hour and often an hour, before a drachm can be rubbed in. On the sixth day the patient gets a warm bath, and on the seventh day begins rubbing again. The process is continued until the symptoms disappear, from thirty to fifty rubbings may be required. It is important to keep the mouth and gums clean. Tar is the best remedy to prevent too severe or too early stomatitis.

(4) *Internal Administration of Mercury*, whatever preparation is used is apt to cause catarrh of the stomach. Calomel is used for children and weak persons and is especially good in hereditary syphilis. Corrosive sublimate is only used for adults.

(5) *Subcutaneous Injection.* This is extensively used, but only in the secondary stage and the slight forms of the tertiary. In using any preparation of mercury hypodermically, care should be taken to inject the subcutaneous cellular tissue, and not the skin or muscles.

(6) *Iodine.* Three preparations of this are used, the iodide of sodium containing sixty per cent., iodide of potassium eighty per cent. and iodoform ninety-three or ninety-four per cent. The first of these is best for children and weak persons. Iodoform is only used hypodermically, one part dissolved in six parts of ether. In mild cases twenty injections will suffice. Iodoform is considered as useful as iodide of potassium in either the secondary or tertiary stage.

PERCUSSION OF THE COLON IN DIARRHŒA.

Diarrhœa depending upon fæcal accumululations in the lower bowel is a well known condition, the treatment of which by laxatives is of long-recognized utility. The diagnoses, however, between this form of diarrhœa and that other whose locality is, more strictly speaking, in the small intestine, has often presented considerable difficulty. In an article upon this subject in the *Deutsche Med. Woch.*, Dr. Geodicke, of Plön, advocates the systematic practice of abdominal percussion in cases of diarrhœa. He was led to adopt the practice in this wise: Several years before, when a young army surgeon, his suspicion was aroused by the number of soldiers coming to him with the complaint of diarrhœa. In order to detect malingerers he made use of percussions of the colon, reasoning that in genuine diarrhœa the desceding colon should be empty, and therefore give a tympanitic percussion note. He was surprised, therefore, to find that the contrary was usually the case. In most of the men in whom trouble actually existed, the percussion note of the descending colon was dull. The investigation thereupon undertaken led him to the following conclusions:

(1) In a healthy individual with normal motions, if we percuss the colon, we shall find that the left iliac fossa usually gives a flatter note than the right.

(2) In patients suffering from diarrhœa, the greater dullness may be on either side, but is usually in otherwise healthy persons on the left.

(3) The same condition obtained in children.

(4) Whenever there is tenderness on pressure, it is found on the same side as the greater dulness.

(5)The term "dulness" is to be understood as relative and not necessarily absolute, for the percussion note on both sides may actually be tympanitic if the colon be distended with gas. The anthor asserts that by far the more common form of diarrhœa is that excited by fæcal accumulations in the large intestines. It is this variety which is characterized by increased relative dullness in the left iliac fossa and in which opiates and astringent remedies are contra-indicated. In the other form of diarrhœa the trouble is in the upper bowel and here the percussion note upon the right side is more dull and less tympanitic than that on the left. It is in these cases that the ordinary diarrhœa medicines find their application. Dr. Goedicke concludes by urging the practice of abdominal percussion in every case of diarrhœa (it is in children that the knowledge of the true nature of the trouble is of the greatest importance). And he states his convictions that the more general this practice becomes the less frequent will opium be employed in the treatment of diarrhœa.—*The Practitioner.*

CHOLERA: A NEW METHOD OF TREATMENT.

On December 4th, 1872, Dr. Henry C. Taylor, published in the *Guy's Hospital Gazette*, a mode of treatment for cholera founded on *postmortem* appearances and on the symptoms observed during life. He again presents his theory to the profession, in *The British Medical Journal*, of July 14th, 1883.

The writer states that the especially remarkable changes presented in the dead body after an attack of cholera, are the clotted state of the blood and the distention of the liver and gall-bladder by bile. The absence of bile from the intestines, vomit and stools, is also to be noted. This is to be explained in two ways: The liver extracts all the bile from the blood without being able to discharge it into the intestine, because the bile duct is blocked by the intestinal inflammation, and if bile were to enter the intestines, for the same reason, would not be capable of absorbing it.

Persons attacked by jaundice, suffer from excessive fluidity of the blood. Bile also hinders decomposition. There are two reasons why bile should be restored to the blood. There is every reason to believe that the abscence of bile causes the thick and clotty state of the blood, and the decomposition of matters present in the intestines.

M. Magendie has shown that the injection of bile into the systemic vessels causes immediate death. Whilst when injected into a portal vessel no harm ensues. Common bile will not answer. The treatment proposed by Dr. Taylor, is to inject the active principle of bile, the substance called bilin. It is this bilin that is restored to the blood by the lacteal vessels, and from which it may be concluded that the injection of this substance into one of the veins of the arm, will not cause bad results. In several instances, he remembers, that the injection of warm water, and even of a saline solution, has been productive of good effect, sometimes followed by a complete recovery of health.

STRYCHNIA IN ALCOHOLISM.

In a paper on this subject (Journal de Therapeutique) M. Lecuyè, is desirous of proving that strychnia is to alcoholism what mercury and iodide of potassium are to syphilis. It cures delirium tremens, diminishes the gravity of wounds and inflammations occurring in drunkards, and wards off epilepsy and insanity. Alcoholism should not be treated symptomatically by various remedies but as a general disease; and the agent for so treating it is strychnia, which will remedy all nervous or cardiac, cerebral or gastric disturbances. M. Lecuyè prefers the sulphate and administers this by subcutaneous injections on account of the usual indocility of these patients and the necessity of acting upon them rapidly. He dissolves thirty centigrammes in thirty grammes of water. Not more than a centigramme should be injected at once, and this may be repeated under watchful guidance every ten hours. In some cases one centigramme per diem suffices, while in others seven may be injected in fifteen hours without inducing symptoms of strychnism. —*The Medical Times and Gazette.*

ACTION OF DRUGS ON SECRETION OF MILK.

The profession generally is acquainted with the fact that a certain number of medicines when ingested by the ordinary channel are in part eliminated by the secretion of milk, but it does not possess precise information· concerning the influence of the medicaments on the quantity and quality of the secretion. Observations recently made by M. Strumpf on the milk of goats as well as on the secretion in the human female during lactation, have in a measure supplied this want. Iodide of potassium was found to lead to a marked fall in the quantity of the fluid secreted, the proportion of protied and saccharine principles was increased, whilst the proportion of fat was diminished. The quantity of iodide secreted was small, so that the notion that iodide of potassium can be administered to children by way of their nurse is not sustained. Alcohol increases the richness of milk fats, whilst the proportion of albuminoids and carbohydrates was not modified. Unaltered alcohol was not detected in the milk. Neither alcohol, morphia, nor the preparations of lead had any influence on the quantity of the secretion. Salicylic acid seemed to excite secretion a little, pilocarpine exercised no effect in this direction. The richness of the milk in sugar was increased by salicylic acid, which passes out of the milk secretion in greater quantities in the human female than in the herbivora. Traces of lead were also recognisable in the milk of those subjects who were ingesting the preparation of lead.—*London Lancet.*

TREATMENT OF WARTS AND CONDYLOMATA BY CARBOLIC ACID.

M. Jullien has described in the *Annals de Dermatologie*, the treatment used by Tommaso de Auricis and himself in cases of warts and condylomata. It consists in repeated cauterizations by means of pure carbolic acid, and is best adapted to large sessile growths or to fumigating cauliflower-like vegetations. The *modus operandi* is very simple. Crystals of pure carbolic acid are kept in a small bottle; the warts having been washed, the bottle is warmed in a flame, or in nearly boiling water, and the crystals touching the glass melt. The fluid is applied with a brush or cotton-wool to the whole surface of the warts, which assume at once a shiny, white appearance. The white layer soon falls off, and on the next day the operation can be repeated. Pure carbolic acid causes much less pain than either chromic or acetic acid. It has been noted that when the cauterizations are repeated the last are more painful than the first. The number of cauterizations necessary for curing the patient is variable. In a case of vegetations on the glands and prepuce, the cure was complete after two applications.—*The British Medical Journal*, August 4, 1883.

CONDENSED MILK AS FOOD FOR INFANTS.

The prejudice against condensed milk simply because it has the appearance of being unnecessarily artificial, has caused Dr. Drewitt to fear a valuable modern discovery is in danger of falling into disrepute. Not only during the fatal summer season, but during every month of the year infantile life is continually being saved by its use. The commonest objection to it is that it is too sweet. Admitting that it is very sweet; on the other hand cow's milk is not sweet enough, and when compared with human milk is very indigestible. It can only be made at all a possible food for babies by adding to it sugar and water, making it more like condensed milk, but even then it is not so digestible as condensed milk. The curdle that is formed in cow's milk by the addition of a few drops of nitro-hydro-chloric acid, is much less friable than that produced in condensed milk that has been made of the same consistence and opacity. After standing for some time, the curd in the fresh milk separates completely from the fluid in a firm clot, while in the condensed milk it remains more granular, more broken up and more mixed with the fluid. It is this hard clot of cow's milk which is more than anything else the *fons et origo* of that only too well known incessant cry of dyspeptic hand-fed babies, and of all the vomiting and diarrhœa which so often carry them off. The analysts, with precise truth, say that this clot or casein is so full of "nitrogenous matter;" and it is actually because of the small proportion of this clot which condensed milk contains that the second objection is made.

The author does not believe that rickets is caused by feeding condensed milk. Oat-meal and other gruels seem to be directly concerned in bringing it about.

Everything depends upon how condensed milk is given. It ought to be diluted with ten or twelve times its bulk of water, or with more than that if the child is thirsty; and if any tendency to sickness remains, about one-sixth of the water ought to be lime-water, which still further neutralises the action of the acid of the stomach. The water should be boiling when added to the milk, especially in the summer. It gets rid of the infusoria in bad water or in a long opened can.—*London Lancet.*

FLOATING KIDNEYS.

Dr. F. Duret, who devotes a pamphlet of some ninety pages to the diagnosis of "renal ectopia," is of the opinion that it is generally regarded as a somewhat rare event, and perhaps too little attention has been paid to its distinctive symptoms. The usual symptoms of floating kidneys are pain in the flank, loins and umbilical region, sometimes radiating and simulating renal or hepatic colic, or a sense of weight sometimes even of pulsation, so that the condition is often the foundation of hysteria or hypochondriasis. Added to this, in many instances, there are digestive troubles, as flatulent dyspepsia and diarrhœa. The detection of a mobile tumor in the loins clears up many an obscure case; but Dr. Duret does not think the physical signs of resonance of the loin with a manifest depression of that region as mentioned by most writers are necessarily present. He divides the cases in which doubt has occurred as to diagnosis into three groups. In the one group there is no appreciable tumor, but the symptoms are marked; and such cases have been mistaken for colic—renal, hepatic and other, for neuralgia, lumbago, and even peritonitis, whilst hysteria has been a frequent diagnosis. In another group, when the signs are more evident, malignant tumors have been diagnosed. In a third, where a tumor is unmistakable, cases have been confounded with cancer of the liver, distended gall-bladder, and even cancer of the stomach, spleen, uterine and ovarian tumors—one case being actually subjected to ovariotomy. Dr. Duret's conclusions are that "renal ectopia" is comparatively rather common; its presumed rarity depending on the fact that it is so often overlooked. Therefore the possibility of its presence should be always born in mind, and in cases of doubt no radical measures should be taken on the ground that *primo non nocere.*—*London Lancet.*

THE INTERNAL EMPLOYMENT OF GLYCERINE.

In a recent paper M. Tisue of Paris gives an account of the results of the employment of glycerine by Drs. Jaccoud and Farrand. The former prescribes it as a stimulant to the digestive organs in the non-febrile stage of phthisis, when for any reason cod-liver oil ceases to be tolerated. The following mixture is given daily in two or three doses:—Glycerine forty, and rum or cognac ten grammes, with one drop of essence of mint. This aromatised, alcoholised compound, of agreeable flavor is well tolerated by the stomach and even after long uninterrupted employment it causes neither satiety nor disgust. The amount of glycerine may be raised to fifty or sixty grammes, but only to persons who do not exhibit any sign of abnormal excitability of the heart or nervous system; and restlessness, unusual loquacity, obstinate insomnia, or an increase of temperature announce that the proper dose has been exceeded. It diminishes constipation in most all cases and yet moderates diarrhœa when this is present; and under its use sleep becomes calmer. In tuberculous cases it induces a considerable amendment in the functional manifestations of the disease, such as dyspnœa, cough and sweating. The expectoration is the sympton which is least influenced. The liver is increased in size and a more abundant flow of bile produced; a more abundant diuresis is observed, and an absolute and relative increase of urea, chlorides and phosphates eliminated by the urine.—*Medical Times and Gazette.*

HOT-WATER ENEMATA IN DELIVERY.

The value of hot-water enemata as a means of hastening delivery, apart from its use in the removal of fæcal accumulations in such cases of tedious labor in which neither ergot or the forceps are admissible, has been hitherto unaccountably ignored in practice. I formerly had warm-water enemata given with the usual object of removing fæcal obstructions from the rectum; in most cases an increased rate of dilation of the os followed. Latterly I have had enemata of hot, not merely warm, water administered, whether there were any appreciable collection of fæces or not, and always with the result of an accelerated rate in the progress of labor. The fact of the os dilating under the influence of the enema whether there was an appreciable quantity of fæces or not in the rectum, proves that their presence does not prevent dilation by causing spasm; at least not in the majority of cases. It follows that the hot enema must act as a direct and powerful stimulant to the uterine muscle, and also to the voluntary muscles engaged in the act of parturition. Judging from the sense of relief which follows its administration, it has, at the same time, a relaxing and soothing effect on these parts; analogous to the effect of hot water applied in the familiar form of a fomentation to an inflamed and painful swelling.

I believe there is less atony of the uterus after delivery when a hot enema has been given, and consequently less tendency to *post partum* hæmorrhage.—D. L. Beckingsale, M. D., in *The British Medical Journal.*

MISCELLANEOUS ITEMS.

Dr. N. W. Webber, Professor Medical and Surgical Diseases of Woman and Clinical Gynæcology, Detroit Medical College, Detroit, Michigan, says: "I have used Iodia in hospital and private practice and *regard it as being a reliable preparation.*"

Dr. McArthur's Compound Syrup of Hypophisphites is receiving the highest commendations of prominent physicians who have used it with success when other preparations have failed. The care with which it is prepared and the purity of the ingredients doubtless contribute to this result.

Rapid cure of Popliteal 'Aneurism by Digital Compression. Mr. Barker, assistant surgeon to University College Hospital, London, communicates a case of popliteal aneurism to the British Medical Journal, which he cured in nine hours by digital compression, made by relays of students. This case may serve to encourage many whose faith in the advantages of digital compression has begun to languish.

Sweats of Phthisis.—Dr. Landowzy employs a powder consisting of ten parts, by weight, of salicylic acid to ninety of talc or starch. Those parts of the body which are habitually the most frequent seats of the sweating, are powdered twice a day. Almost always it gives temporary relief; and sometimes the amelioration persists for some days after the application has been discontinued.—*Journal de Therapeutique.*

Pus and Microzymes.—The formation of pus has been shown by many observers to be closely connected with the presence of microzymes. Uskoff published some experiments in *Virchow's Archiv*, Volume LXXXVI, in which he stated that small quantities of indifferent fluids, such as water, milk, and olive oil, produced no pus, but that large quantities did so. These experiments have been repeated by Orthmann, and he finds that when sufficient antiseptic precautions are taken, even very large quantities may be injected without any pus forming.—*Virchow's Archiv.*

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ORIGINAL ARTICLES.

A TABULAR STATEMENT OF THE SURGICAL WORK DONE IN THE DEPARTMENT OF MEDICINE AND SURGERY OF THE UNIVERSITY OF MICHIGAN DURING THE SCHOOL YEAR OF 1882 AND 1883.

BY DONALD MACLEAN, M. D.,
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Arranged by T. J. SULLIVAN, M. D.

The last issue of the journal contained a tabular statement of the surgical cases treated by me at my public clinique in the University of Michigan during the session 1881–2; the result in a large proportion of the cases having been ascertained by recent inquiry. The following is a similar statement for the session 1882–3. Inasmuch as every student in the class was afforded full opportunities of observing all stages of each case, as the patients were registered in the surgical clinic, they were assigned to students of the senior class in alphabetical order. It was the duty of each student receiving a patient to visit him morning and evening and dress his wounds or give him any attention that may be required under the direction of the house-surgeon.

The ovarian cases have been omitted as in the last report but will be published very soon. I hope to be able soon to publish in detail some of the other interesting cases given in the following table.

NAME.	AGE.	DIAGNOSIS.	TREATMENT.	RESULT.
Merrit Cox	18	Abscess lumbar region	No treatment	
Mrs Etza Merz	46	“ of thigh	Free incision and drainage	Cured.
Ozro Rankin	11	“ of left side	No Treatment	
Oscar Walker	34	“ below sternum	Free incision and drainage	Cured.
W. A. Horey	21	“ of neck	“ “ “ “	Much improved.
Miss J. Amefelt	23	“ of jaw	“ “ “ “	Cure.
W. D. Hart	37	Anchylosis of knee-joint	No chance for improvement	
S. Markee	23	“ “ “ “	“ “ “ “	
Harry Nelson	17	“ “ “ “	Amputation 4 inches below knee	Cure.
George Robel	17	“ “ “ “	No chance for improvement	
S. A. Bradford	43	“ “ “ “	Advised passive movements	
J. Brown	25	“ “ “ “	Adhesions broken, passive movements	Improved.
David Tobin	34	Aneurism of femoral artery	Hunter's operation	Death.
Jacob Lindsey	19	“ femoral	No treatment	
James Stewart	51	“ of abdominal aorta	Did not remain in hospital	
Philip Hughes	22	Bullet in head	Not a case for operation	
Orin Todd	27	Bursæ on wrist	Returned to show result	Cure.
D. Craig	7	“ “ back of wrist	Seaton	Cure.
Miss Hubbell	22	“ “ “ “ “	Did not remain for treatment	
Y. F. Dewitt	39	Caries of carpal bones	Cast	Cure.
Dennis Connors	6	“ of tarsal bones	Cast	Unknown.
Ed. Doran	20	“ “ “	Syme's ankle-joint operation	Cure.
Mary Glenn	4	“ tarsal bones	Did not remain	
Chas. Harrington	15	“ bones of foot	Syme's ankle joint amputation	Cure.
J. F. Russell	37	“ tars'l and met. bo'es	“ “ “ “ “	Cure.
D. Whittiker	28	“ bones of hand	Amputation 2 inches above wrist	Cure.

Emma Burleigh	14	Carries of bones of hand	Cast	Cure.
Mrs. Mary York	33	Carcinoma of breast	Operation advised. Did not submit	
Mrs. P. Standish	45	" " "	"	Cure.
H. Shoffer	66	" of œsophagus	Incurable	
Mrs. H. Belders	33	" of breast	Unfit for operation	
Mrs. A. Derbyshire.	48	" " "	Operation	Cure.
Mrs. Jones	47	" " "	"	Cure.
Mrs. D. Shurte.	53	" " "	"	Died.
Mrs. S. Shepard	61	" " "	Unfit for operation	
Geo. Foster	50	" " rectum	Palliative	
J. P. Conners	26	Cystitis, chronic	Tr. iron and fluid extract of ergot	Improved.
J. Hogan	64	" "	Milk diet ordered	Unknown.
Geo. H. McVay	19	" "	" no medicine	Cure.
Alex. Ponbear	57	" "	Ergot and iron	Improved.
B. Webb	47	" "	Milk diet	Improved.
Chas. Williams	70	" "	" ergot and iron	Died.
Mrs. Lovee	26	Cyst on scalp	Operation	Cure.
Isaac Lyon	47	" upper lip	Incision	Cure.
W. Stratton	27	" neck	Operation	Cure.
Mrs. Giddens	32	" arm	"	Cure.
Thomas Martin	16	" neck	"	Cure.
Eugene Moore	11	Cystic tumor	"	Cure.
Carrie Billings	8	Contraction of fingers	No treatment	
Wm. Schopp	18	" of tendon of great toe	Amputation	Cured.
Mr. W. Stoddard		Carbuncle on hand	Poultice	Unknown.
Julius Garrett	21	Cleft palate	Turned over to dental department	
Nelson Negas	7	" "	" " " " "	
Heber Whiting	15	Lateral curvature	Exercise of muscle	Unknown.
John Read	5	Antero-posterior curvature	Cast	Improved.
Mrs. J. Bailey's boy.	8	Curva. of spine and abscess	Turned over to medical clinic	
Mrs. Gratton's girl	2	Antero-posterior cur. of spine	Plaster cast	Improved.
Minna Malday	9	" " " "	" "	Improved.

NAME.	AGE.	DIAGNOSIS.	TREATMENT.	RESULT.
L. Lamphire	7	Antero-poterior cur. of spine	Jury mast	Cure.
Mrs. H. Bennis' child	2½	Lateral curvature	Exercise of muscles	Improved.
Peter Schmidt	13	" and antero-pos. cur.	Cast	Improved.
Mary Sanzi	12	" curvature	No treatment necessary	
C. C. Lemon	17	Cat-bite on wrist	Advised to exercise weak muscles	
Edward Grace	3	Dislocation of patella	Not amenable to treatment	
William Garvin	8	Deformed nose	" " " "	
William Hobert	24	Diseased testicle	Testicle removed.	Cure.
Mrs Mead	77	Disease of great toe nail	Removal of nail	Cure.
W. J. Moriarty	30	Dislocat'n of ulna and radius	No treatment	
Chas. Sedgwick	8	" " thumb	Reduced	Cure.
R. Cole	18	" " of head of femur " into obdurator foramen	"	Cure.
John Dobert	47	Dislocation of humerus	No treatment	
Miss Odsfield	4	Deformed thumb	Not amenable to treatment	
F. Basset's child	14 m's	Extrophy	Did not remain for treatment	
E. Bremose	6	Epilepsy	No treatment	
J. Falkerson	74	Epithelioma of lip	Removal by operation	Cure.
Jonn Gunn	72	" " "	Not amenable to treatment	
M. Highland	28	" " "	Removal by operation	Cure.
P. Oatman	73	" " "	Not amenable to treatment	
W. Parker	60	" " " and cheek	Arsenic and iodoform	Unknown.
G. Mansfield	7	Enlarged tonsils	Excision	Cure.
F. Rapplege	27	" uvula	"	Cure.
E. Freehouse	40	" prostate	Ergot and iron	Improved.
Maggie Binger	5	" gland under chin	Did not remain in hospital	
L. R. Snow	46	" prostate	Ergot and iron	Unknown.

Chancey Gunn	51	Enlarged prostrate	Ergot and iron	Unknown.
James Hoxie	70	“ “	“ “	Unknown.
Lyman Ames	50	Floating cartilage in knee-joint	Left before treatment was instituted	
Archie Farrow	20	Fistula in perineo	External urethrotomy	Much improved.
Alex Brown	49	“ “	“ “ “	Cure.
S. Bickley	21	“ “	Dilatation	Cure.
F. K. Clarke	25	“ ano	Operation	Cure.
E. T. Drew	35	“ “	“	Cure.
Benj. Dailey	33	Fissure of rectum	Stretching of sphincter and incision	Improved.
Augusta Kendall	33	Fistula in ano and Pott's dis.	Iodide of potassium and plaster cast	Cure.
W. Randall	21	“ “	Operation	Cure.
H. Euldholm	44	Fract'e of tibia and fib., anc't	Passive movements advised	
James Ewing	26	“ “ clavicle, anc't	“ “ “ “	Unknown.
Henry Crookall	26	“ “ lower jaw	Application of bandage	Cure.
Oliver Clark	3	“ “ humerus, anc't	Advised against treatment	
Mrs. E. Dunnigan	35	“ “ tibia and fib. rec't	Pillow splint and cast	Cure.
Eddie Mulreed	11	“ “ olecranon process	Application of splints	Cure.
C. Schlenher	22	“ “ right clavicle and left acronium process	Rest in the horizontal position for a week, then bandage and sling	Cure.
Geo. Cottingham	49	Fatty tumor of thigh	Operation	Cure.
Harriet Davis	55	“ “ shoulder	“	Cure.
John Lemieux	51	“ “ “ “	“	Cured.
Mrs. Eliza Tabor	36	“ “ neck	“	Cured.
Martin Kepler	42	“ “ arm	“	Cure.
Mrs. F. Carey	50	Fibroid of uterus	Not a case for operation	
John Johnson	27	Foreign body in nose	Removed piece of bark	Cure.
William Miller	42	Frozen hands	Amputation of six fingers	Cure.
Lawrence Batway	28	Gonorrhœa, imaginary	Good Advice	Relieved.
L. R. Eldred	27	“	Did not submit to treatment	
Geo. Rum	20	Gleet	Introduction of sounds	Much improved.
Henry Rum	25	“	“ “ “ “	Much improved.

NAME.	AGE.	DIAGNOSIS.	TREATMENT.	RESULT.
Wm. McDuffie.......	32.......	Gleet..................................	Did not remain in hospital.............	
M. Lamphier...........	38.......	Gunshot wound, elbow-joint	Resection..	Cure.
J. W. Messersmith..	50.......	Gonorrhœa...........................	Passing of sounds..........................	Improved.
Mrs. Willson...........	50.......	Goiter and hernia................	Went home without treatment.......	
Mrs. B. Van Ess......	36.......	Goitre..................................	Iodide potas. ammo. bromide..........	Improved.
Earnest Arnold.......	4.......	Hare lip..............................	Operation.......................................	Improved.
Nellie Pooles..........	15.......	“	“	Cure.
M. A. Rhodes.........	21.......	“	“	Cure.
Mrs. L. Calvil's ch'd	2.......	“	“	Improved.
F. Carpenter's boy...	5 m's	“ and cleft palate.......	Will return when older for operation	
Z. Long.................	....	“ “ “ “	Turned over to dental department	
Donald Murchison..	35.......	Hemiplegia, syphilitic..........	Pot. iodide, 30 grains, 3 times daily	Much improved.
Mrs. Slenon's boy...	2.......	Hernia, inguinal...................	Advised to have truss fitted...........	
C. Blair's baby twins	8 w'ks	“ “ and hydrocele, both on right side	Advised against treating hernia......	
Chas. McQueen.......	62.......		Advised to have truss fitted...........	
D. Brown...............	27.......	Hernia, inguinal..................	“ “ “ “	
Geo. Palmer...........	60.......	“ femoral and omen...	Operation, removal, mass omentum	Died.
James Cox.............	22.......	Hydrocele..........................	Tapping and injection tinc. iodine...	Cure.
John Flynn............	52.......	“	“ “ “ “ “ ...	Cure.
E. G. Goodrich........	53.......	“	“ “ “ “ “ ...	Cure.
J. A. Owen.............	52.......	“	Did not remain in hospital............	
Joseph Wilson........	63.......	“	Operation.......................................	Cure.
Mrs. L. D. Kelley...	32.......	Hemorrhoids......................	Iodoform and vaseline.......	Unknown.
John Greth............	41.......	“ “ external..........	Ligation of internal and excision ex.	Cure.
Edgar Green...........	22.......	“ “ int. and ext.....	Did not remain for treatment..........	
J. K. Hart..............	48.......	“ “ internal...........	Excision...	Cure.
Mrs. Lamphire........	30.......	“ “ external..........	Iodoform and vaseline locally.........	Improved.

Isaac Parker	57	Hemorrhoids internal, small	Iodoform and vaseline locally	Improved.
McLaughlin	20	" " "	Ligation	Cure.
James Mencke	58	" " and external	" and excision	Cure.
Mrs. Anna McKie	51	" " "	Iodoform and vaseline locally	Unknown.
Chas. Kapp	17	" " small	Free drainage and extension	Improved.
H. McDougall	22	Hip-joint disease, third stage	Elix. iron, quinine and strychnia	Unknown.
Frank Mliler	9	" " " "	Advised to use moderately	Unknown.
Nicholas Ott	36	" " " "	Extension by weight and pulley	Improved.
Edith Shippy	5	" " " sec. stage	Exten., weight, pulley, and continue at home	Much improved.
Geo. Root	16	" " " first stage	Advised to improve health	Improved.
Sam Ewing	4½	" " " anchlosis	Extention of weight and pulley	Improved.
Charles Hemp	26	" " " first stage	Advised to wear Sayre's short splint	Cure.
Mrs. Diamond's boy	21 m's	" " " chronic	Extention and counter-extension	Cure.
Lestir Walker	15	" " " first stage	" " " " "	Unknown.
Edwin Wilson	22	Ingrowing toe-nail	Removal of one-third of nail	Cure.
Mrs. Utley's boy	10	Inflam. of spinal cord	Actual cautery	Slight improv'nt.
Henry Rheab	19	Injury of sup. maxilliary	Linament of aqua ammonia and oil	Improved.
W. A. Chamberlain	63	" hip-joint	No treatment necessary	
Mrs Clark	30	" side	" " "	
O. Lislinder	21	" jaw	" "	
A. D. Pratt	51	Lumber abcess	Removal by knife and cautery	Much improved.
Horace Baker	50	Lupus of cheek	Paquelin's cautery and iodoform	Unknown.
John Carrol	84	" "	Iodoform locally	Cure.
Mrs. Mary Hamilton	50	" under eye	" " " and arsenic inter.	Unknown.
William Hine	55	" of face and nose	Nitrate of silver and iodoform	Cure.
William Rupter	59	" under eye	Actual cautery	Improved.
John L. Durbin	32	" of cheek	" "	Improved.
E. J. Shaw	35	" chin	" "	Cure.
Eddie Doyle	9	" under eye	" "	Cure.
Harry Danford	5	Long fore-skin	Circumcision	Cure.
A. Wuster	24	" "	Slit up foreskin	Cure.
B. Surles	8	" " and contracted	Circumcision	Cure.

NAME.	AGE.	DIAGNOSIS.	TREATMENT.	RESULT.
Geo. Weston	8	Long foreskin	Circumcision	Cure.
David Boyce	25	Necrosis of tibia	Not a case for operation	
John Augustin	35	“ “ humerus	Did not remain for treatment	
E. Dixon	23	“ “ “	Dead bone removed	Improved.
Frank Cooley	10	“ “ tibia	“ “ “	Improved.
Mrs. M. Deveraux	33	“ “ femur	“ “ “	Improved.
Joseph Goodell	20	“ “ “	Did not remain for treatment	
Ole. Gustafson	17	“ “ tibia	Dead bone removed	Cure.
John Hildreth	22	“ “ femur	“ “ “	Much improved.
Martha Kenedy	15	“ “ tibia	“ “ “	Much improved.
Master A. Alden	7	“ “ “ and fibula	“ “ “	Much improved.
J. C. Zedrow	28	“ “ tibia	Did not remain for treatment	
Geo. Trash	32	“ “ humerus	Private examination and operation,	Cure.
L. Seaman	23	“ “ metacarpal bone	Amputation	Cure.
Mary McKenzie	54	Neuralgia inf. dent. nerve,	Resection of nerve	Cure.
C. B. Williams	55	“ facial	“ “ “	Cure.
Bessie Allen	1	Nævus	Advised against operation	
J. M. Clocks	28	“	Did not wait for treatment,	
Mary Fitzgerald	30	“ on cheek	Removal by scissors	Cure.
B. Garoni	6	“ nose	Advised against treatment	
Sulu Getohell	2	“ hand	Did not remain in hospital	
S. Hay's baby	11 m's	“ in upper lip	Removal in mass	Cure.
C. Laubengayer	1	“ cheek	No treatment necessary	
Miss S. Dome	25	Nasal polypi, hysterical	Operation not necessary	
Chas. Stenvin	28	“ “	Removal with forceps	Cure.
Mrs. S. Spencer	28	“ “	“ “ “	Cure.
Thomas Harris	38	Oxyluria	Acid, nitro muriatic	Unknown,

Mrs. J. Hooper	51	Osteoma of scapula	Removal by operation	Died.
Chas. Paddock	20	“	Advised against treatment	
Frank M. Wheton	17	“ of leg	Did not remain in hospital	
James Watson	70	Purigo	Hydrate of chloral	Unknown.
LeRoy Benson	14	Paralysis, infantile	Advised constant use of limb	
Nettie Maloy	16	“ “ “	“ to wear high shoes	Unknown.
Chas. Southworth	33	“ “ “	Proper exercise and good diet	
H. W. Dean	47	Painful stump and long	Amputation four inches below knee	Cure.
John Murry	32	“ “ “ ulcer	“ “ above knee	Cure.
William Bevid	20	Periostitis of tibia	Actual cautery	Cure.
A. M. Croshaw	48	Syphilitic periostitis	Pot. iodide, soothing applications	Improved.
W. J. Clark	27	Periostitis of wrist	Actual cautery	Improved.
Wm. Kerkman	24	“ of tibia	“ “	Cure.
Wm. Merril	26	“ “ “	“ “	Cure.
Scot. Shoemaker	20	“	“ “	Cure.
John Gillett	24	Ranula	Operation	Cure.
Jennie Preston	12	Recto-vaginal fistula	“	Cure.
J. H. Stearns	33	Sinus near rectum	Free incision and drainage	Cure.
Gus. Dempsy	29	Syphilis	Mercury and quinine	Much improved.
Mrs. C.E. Slackhouse	40	“	Hydrag. cum. creta and pot. iodide,	Much improved.
A. Wilcox	29	“	Did not remain for treatment	
John Fahey	45	Sprain of right shoulder	Rest and evaporating lotion	Cure.
Mrs. P. Hayner	56	“ leg	Advised to use limb	
X. Kopp	60	“ thumb	“ rest	
Albert Church	17	“ ankle	No treatment necessary	
Mrs. D. Sterle	59	Senile gangrene	Removal of dead phalanges	Cure.
Albert Work	31	Spermatorrhœa, imaginary	No treatment	
Rem. Morey	22	Scalp wound	Horse haire suture and rest	Cure.
Ganie Tupper	7	Spina bifida	Unfit for operation	
J. C. Smith	20	Supuration in ankle-joint	Free incision and cast	Cure.
Mrs. C. Kilner	28	Subcutaneous tubercle	Not a case for operation	
Lillie Benaway	7	Stone in the bladder	Rapid dila. of urethra and extrac.	Cure.
W. N. Darrow	28	Stric're of urethra spasmotic	Dilatation	

NAME.	AGE.	DIAGNOSIS.	TREATMENT.	RESULT.
C. E. Clarkson	38	Stricture of urethra	External perineal urithrotomy	Improved.
W. H. Davitt	30	" " "	Dilatation	Cure.
D. Holland	46	" " " enlg. pros.	Tr. ex. ergot and tr. iron	Cure.
Levi. McDonald	38	" " "	Dilatation	Unknown.
Chas. McCall	24	" " "	"	Unknown.
Chas. Shears	23	" " " imaginary	Passed largest sound	
Chas. Steward	40	" " "	Dilatation	Cure.
L. Lillia	40	Synovitis, chronic	Amputation above knee	Cure.
F. Belanger	34	" of knee-joint	Plaster cast	Cure.
John Boyle	16	" chronic	"	Relieved.
Mrs. Eliza Alcot	54	" " "	"	Improved.
M. J. Flosboy	50	" " "	Went home without treatment	
C. C. Hystay	25	" " " malarial	Quinine	Cure.
Minnie Miller	7	" of knee-joint	Free incision to evacuate pus	Cure.
W. T. McCarty	23	" " "	Did not remain for treatment	
Chas. Moulton	5	" chronic	Extention and counter-extension	Improved.
O'Neil's boy	19 m's	" " "	Plaster cast	Cure.
Geo. Rhodes	27	" " "	Free incision and antisep. dressing	Unknown.
E. C Smith	24	" " "	Cast applied	Improved.
C. E. Saben	45	" " "	Sayre's extension splint	Unknown.
John Vint	28	" " "	Cast applied	
Earl Wilson	9	Talipes	Did not wait for treatment	Good result.
Geo. Walker, boy	3	" equino-varus	Division of tendon and rubber mus.	Good result.
Van Fleets boy	4 w'ks	" " "	" " ' " " "	Cure.
Mrs. A. Tuthill	82	Tumor of neck	Removal by operation	Cure.
Willie Zedrow	16	" albus	Did not submit to treatment	
William White	45	" " "	Incurable	

Mrs. M. Wheeler	54	Tumor of nose	No treatment advisable	
Robert Wheeler	14	Talipes equino-varius	Division of tendons	Unknown.
Clarisa Stevens	4	“ “ “	Division of tendons, rubber muscle	Improved.
Mary Bevier	29	“ plantarus	Advised to wear proper shoe	
E. Roegler	21 m's	“ equino-varus	Division of tendons and rub. mus.	Improved.
Jay Cobb	12	“ “ “ valgus	Went home without operation	
M. Salendress	3	“ equinus	Division of tendons and rubber mus.	Improved.
Orley Monroe	15	“ “	Rubber muscles	Improved.
H. Q. Waramer	51	Tumor of lower jaw	Removed by operation	Cure.
Mrs. Lucy Collier	19.	“ neck	Cod-liver oil and syr. iodid., iron	Improved.
P. S. Dodge	34	“ near ear	Did not remain for treatment	
Master Grossman	3	“ albus	Plaster caste	Improved.
Millie Heckman	10	“ on chin	Not a case for operation	
Mrs. E. Janna	58	“ sole of foot	Operation	Cure.
P. Kern	44	“ scalp	Did not wait for treatment	
E. McIntee	42	“ albus	Not a case for operation	
A. H. Miller	50	“ on cheek	Removed with scissors	Cure.
Amel Meyer	19	“ neck	Fowler's solution	Unknown.
Mrs. J. Nellis	35	“ parotid region	Pot. iodide and arsenic	Unknown.
Joiephine Amfelt	23	“ jaw	Operation	Cure.
C. M. Preston	66	Ununited fracture of ulna	Not a case for operation	
Charles Parker	20	Ulcer of leg, indolent	Red-wash and water-dressing	Improved.
John Sedor	62	“ “ “	Advised red-wash	Unknown.
George Trowbridge,	37	“ “ “	Rubber bandage and water dressing	Improved.
J. Crosby	27	“ over sternum	Iodoform	Unknown.
James Fogerty	40	“ of leg and vari. veins	Rubber bandage and black-wash	Improved.
John Brennen	30	“ “ indolent	Blister and red wash	Cure.
Fannie Burget	38	“ “ tongue and arm	Nitrate of silver and mercury	Improved.
Eliza Bowers	59	“ leg and varic. veins	Rubber bandage and black wash	Cure.
James Baker	20	“ “ indolent	Red wash, and water dressing	Cure.
Sarah Alcot	36	“ “ “	“ iodoform dressing	Cure.
Thomos Dickson	48	“ neck	Iodoform	Unknown.
Lyman Dilley	71	“ leg, indolent	Rest, rubber bandage, black-wash	Improved.

Name.	Age.	Diagnosis.	Treatment.	Result.
Wallace Parker	14	Ulcer of leg	Red-wash and pot. iodid	Improved.
A. Darley	22	“ “ “	“ “ “	Improved.
Miss Crupp	12	“ of leg, indolent	“	Improved,
N. E. Mathias	31	“ “ and varicose		Cure.
		veins	Rubber bandage and black-wash	Much improved.
W. E. Lumey	17	“ “ indolent	Red-wash	Cure.
J. Larkin	64	“ “ and vari. veins	Rubber bandage and black-wash	Cure.
Charles Muire	22	“ “ indolent	“ “ “ “	Improved.
Mrs. M. Overly	31	“ “ “	Red-wash	Cure.
Eva Hazolswordt	52	“ nose	Not treated	
Mrs. A. Hugh	53	“ of leg, indolent	Rubber bandage	Continued home.
Mrs. H. Hill	51	“ “ “	Poultice and red-wash	Cure.
Mrs. F. Hodges	34	“ “ “	Rest, poultice and red-wash	Cure.
Joseph Rappleye	19	Varicocele	Operation	Cure.
Martin Burns	21	“	“	Cure.
E. H. Loghead	24	“	“	Cure.
Burt Main	23	“	“	Cure.
Horatio Nelson	39	“	“	Cure.
W. O. Towrey	27	“	“	Cure.
Henry Kiel	30	Sciatica	Nerve stretched	Cure.
Fred Haywood	20	Venereal warts	Removed with scissors	Cure.
E. Schlemmer	32	“ “	Did not wait for treatment	
Alice Bunday	20	Vascular tumor of orbit	Electrolysis	Cure.
D. M. Chuach	52	Varicose veins	Rubber bandage	Improved.
Mrs. Slecker	9	Wry neck	Not a case for operation	
Mary Stichner	15	Whitlow on thumb	Treatment unnecessary	
Eliza Salmon	30	Wens	Operation	Cure.

RECENT PROGRESS IN THERAPEUTICS.

BY VICTOR C. VAUGHAN, M. D.

Treatment of Acute Dysentery.—Within the last few years, coto bark has been brought prominently into notice as a remedy in this affection. When there is need of an astringent to the mucous membrane and a sedative, there is nothing better. We generally prescribe the remedy with very small doses of laudanum, though, at times, we have used the coto without the opium and with results equally good as when the two were combined. A good formula is as follows:

℞. Tincturæ opii.................................. f℥j.
Decocti coto corticis....... .... f℥viij.

M. S. One tablespoonful every two hours until the discharge ceases.

In the mild form of dysentery, as we have it in Michigan, a few doses of the above preparation will be sufficient. Care must be taken that the bowels are not blocked too suddenly and for too long a time. A dose of castor oil combined with from ten to twenty drops of laudanum should be given if the bowels remain inactive for more than twenty-four hours after taking the coto.

Even in the Southern States, where a severer type of dysentery prevails, this remedy is highly praised.

Palatable Drugs for Children.—Dr. Churchill (*British Medical Journal*) gives a few points of value on this subject which we here condense. Castor oil should be shaken up with three or four times its volume of hot milk. This forms a nice emulsion and disguises the taste of the oil. We may here add that most children take Scott & Bowne's emulsion of castor oil without any hesitancy. Rhubarb or the compound rhubarb pill may be rubbed up and buried in a chocolate cream when it will be eagerly taken by children. The medicated fruit lozenges are very serviceacle, though some of them contain podophyllin and sometimes gripe the little patient. A teaspoonful of compound liquorice powder (containing senna) may be strirred up with warm milk, ten to twenty drops of chloric ether added, and taken at bed time. But few children would object to fluid magnesia or calcined magnesia, especially when flavored with syrup of orange or mulberry. Extract of liquorice may be added to the decoction of aloes until all the bitter taste is taken away. About half a teasponful of powdered aloes mixed with brown sugar may be given. The electuary of senna is taken without objection by most children, also the syrup of senna and the infusion of prunes. A seidlitz powder flavored with lemon juice is readily taken.

Most of the febrifuge mixtures need no flavoring. Sweet nitre, ammonium acetate and spirits of chloroform are all pleasant to take. The nitrate and chlorate of potash are saltish, but the sal prunelle and Wyeth's compressed tablets will be taken by the older children without protest. Cough mixtures can generally be made pleasant by using some syrup, as tolu, as a vehicle.

Children take the saccharated carbonate of iron and steel wine. Quinine is best given dissolved in the syrup of orange without any water.

We will say that for some years we have used quinine for children in the manner recommended by J. Lewis Smith, that is, one grain of quinine to a drachm of the compound elixir of taraxacum. This does not completely hide the bitter taste, but it does so to such an extent that most (not all) children will take it without hesitancy. A good extract of liquorice also is valuable in disguising the taste of quinine. The tannate of quinine put in chocolate lozenges is tasteless but we seriously doubt if any of it is absorbed.

The Treatment of Chronic Bright's Disease.—Great improvement has been made in the treatment of this affection within the past few years, not so much by the discovery of new principles as by the close attention given to details. We can only outline the treatment here. Some good tonic which should contain iron, must be given almost continuously for months, and it may be for years. It will be necessary to change the tonic occasionally. Fuchsin is given to decrease the excretion of albumen. In some cases it seems to do good, though more extensive trial must be made before any positive decision can be arrived at. Fuchsin is best given in pills, and from three to ten grains per day may be given. In prescribing this remedy, be sure to state that it must be free from arsenic. This the druggist must determine before he fills the prescription. Fuchsin colors the urine, producing a rose tint. In some rare cases it does not reach the kidney or at least it does not color the urine, probably being excreted by other avenues. In such cases it does not have any good effect. The diet of a patient with this trouble must be selected with care. Avoid an excess of nitrogenous food, especially lean meat. Let milk, if it agrees with the patient, be an important article of food. The clothing must be warm and exposure to cold must be avoided. The patient must have frequent warm baths, and it is well to rub the body thoroughly once a day with a good flesh brush. The acute attacks, when uremia is threatening must be treated with hot baths, and if necessary with purgatives, elaterium, and diaphoretics, pilocarpin; but in the majority of instances the hot bath is sufficient. I have seen a patient in a uremic stupor lifted from her bed and put into a hot bath, and after five minutes, taken out wrapped in flannel, thoroughly rubbed and placed in a dry bed, when she would be wholly relieved of the threatened uremia. Under careful treatment, chronic Bright's disease, although formidable, is not now regarded as necessarily fatal within a short time as is taught in many of the text-books.

Constipation.—Cascara sagrada has proven itself very efficient in continued constipation, due to sluggishness of action of the liver and intestines. Hunyaidi janos water is excellent when a saline apperient is needed.

Acute Tonsilitis.—Dr. J. Solis-Cohen (*Medical News*) divides this disease clinically into two groups, (1) simple inflammatory or local, and (2) rheumatic or constitutional. For the first of these, he uses a modificationof the old guaiac treatment The preparation is made in the following manner: Two fluid drachms each, of the ammoniated tincture of guaiac and the compound tincture of cinchona, are mixed with six fluid drachms of clarified honey and shaken together until the sides of the containing vessel are well greased. A solution containing eighty grains of chlorate of potassium in sufficient water to make four fluid ounces is then gradually added, the shaking being continued. With due care in its preparation, the resin will not be precipitated and the mixture will be pleasant. The patient is directed to use this as a gargle freely and at intervals varying from one-half hour to three hours. If necessary a saline cathartic is given and relief is obtained in a few hours. The mixture is called the *gargarysma guaiaci composita.*

In the constitutional form the bowels are moved with a saline, and the following prescription given:

℞.	Sodii salicylatis................................	ʒij.
	Olei gaultheriæ................................	♏v.
	Liquoris ammonii citratis,	
	Syrupi simplicis................................	āā fl℥ij.

M. S. A tablespoonful every two hours.

As soon as the pain is relieved, the intervals are lengthened. Ringing in the ears calls for cessation of the salicylates. After the pain is relieved, the salicylate of quinine or cinchonodine, in five grain doses at intervals of four or six hours, may be given as a tonic.

Resorcin in Malaria.—Dr. Bassi (*Med. Ital. Pro. Veneti*) has tried this remedy in twenty cases of intermittent fever. In seventeen, success was marked; in the other three, the drug failed, as did quinine and arsenic, tried later. Resorcin was given in doses of from two to three grams, one-half hour to one hour before the time for the chill. Larger doses do no more good than these, and seem to exhaust the patient. The drug causes ringing in the ears. Resorcin seems to have about the same value as quinine in this disease, but it has the advantage of being cheaper,

Quebracho.—This remedy has now been quite thoronghly tried for the relief of dyspnœa. It is probably the only remedy we have which possesses a marked antidyspnœic action. It undoubtedly acts through the nervous system, and is of value only when the trouble is wholly due to nervous derangement, as in spasmodic asthma. Even in long standing cases of this it sometimes fails to give relief. The fluid extract is furnished and may be given in doses of from thirty to forty drops every three or four hours. With us, larger doses do not seem to increase the efficacy of the remedy.

Treatment of Metorrhagia.—Some of our most eminent authorities now give high praise to cannabis indica in this affection. Though the cause of the disease must be ascertained and the special treatment will depend upon the pathological condition of the uterus. Preparations of nettle juice have also been used in this affection. The entire plant is submitted to strong pressure, and the juice is filtered and given in syrup and water, A tincture and fluid extract are now prepared in some European countries.

Treatment of the Opium Habit.—Various remedies for this disease have been announced, had their little day of glory and been forgotten. We have tried two of them, cannabis indica and coca. With the first we were at first flattered with the promise of success. A young man came and told us what a slave to the habit he was, how he suffered and how many grains of morphine per day he took. As usual, he blamed a physician who had prescribed morphine during a recent illness. The cannabis indica was given and the patient asked to report once a week. He came regularly and each time reported in most grateful terms the great relief which he had secured. Now, he only took half as much per day as formerly; now, he has still decreased the dose and so on until at last he is free from the vile habit.

Soon an article on the successful treatment of the opium habit would have appeared, had not the druggist accidently told the doctor that a certain young man bought so much morphine per week. The patient had lied to his doctor, lied systematically. Coca was tried in another case, but did no good. Now comes a pamphlet containing the records of many cases cured with *avena sativa* (oats). We do not believe one word of it. In the reported cases, the word of the patient is the only guarantee of the cure. An opium eater will not tell the truth when a falsehood will serve his purpose better. The only cure for the opium habit is for the victim to be placed where it is wholly impossible for him to secure any of the drug.

Typhoid Fever.—The opinion that typhoid fever can be aborted, by proper treatment, is now held by some physicians. Purgative doses of calomel are given repeatedly for the purpose of destroying the germs and producing healthy action of the liver and other organs. Iodine and carbolic acid (two parts of the tincture of iodine to one of strong carbolic acid) are given in from one to three drops at a dose every three hours. Recently the salicylate of bismuth has been recommended as a specific in this disease.

TRANSLATIONS.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.
BY RALPH D'ARY M. D., ROMEO, MICHIGAN.

SUSPENSION OF PATIENTS FOR TABES DORSALIS.

Dr. O. O. Mochntkofsky, of the Kasan hospital, has been carefully experimenting on the influence of repeated suspensions of patients (as for the application of plaster jackets) suffering from various diseases of the spinal marrow. His very interesting, thoroughly scientific, and exhaustive observations he has communicated to the *Vratsh*, in an article running through five numbers of that most excellent magazine. We are sorry that want of space does not allow us to give a complete translation of the article, but the condensed extract which we give is sufficient to acquaint our readers with the results of these experiments, which promise to introduce a new phase into the treatment of tabes dorsalis.

The first patient treated was a confirmed case of tabes dorsalis. When admitted into the hospital he could hardly stand, and immediately fell over when he closed his eyes; all the symptoms of tabes dorsalis and locomotor ataxia were strongly pronounced.

After the second suspension he began to feel better; the sciatic pains and feeling of coldness in the feet became less, and he could stand up without a cane.

After the eighth suspension he began to walk without a cane.

After the eighteenth suspension he could walk without a cane, even with closed eyes. With his eyes open he could walk quite well, and promenaded much in the yard, but he still continued to throw his feet forward with a jerk. He was able to stand on one foot for two minutes, etc.

Altogether he was suspended ninety-seven times with the following results:

(1) Complete cessation of the lancinating pains; (2) improvement of ataxia in walking; (3) considerable improvement in the musculo-cutaneous reflexes on pain, as from pin-pricks, etc., with general improvemeut in the perception of pain in the extremities; (4) disappearance of certain paræsthesiæ, such as the feeling of cold, formication, prickling, girdling pains; (5) increase of muscular power in the extremities (upon careful investigation with the dynamometer at the beginning and close of the treatment); (6) improvement in ability to stand or walk with eyes open or closed; (7) return of sexual power; (8) increase in size of atrophied muscles.

The treatment had occupied eight months. In the following there had occurred *no change:* (1) in the patient's weight; (2) the absence of the knee-phenomenon; (3) in the ophthalmic conditions; (4) in the pupils.

The second patient was a case of gray degeneration of the posterior (white) spinal columns, clinically in the stadium of paralysis. He complained of—

weakness in the lower extremities, so that he could not get up and out of bed; being set on his feet, he could not stand at all, even with assistance;

frequent tenesmus of the bladder;

constipation (four or five days at a time);

complete impotence;

severe lancinating pains in all the extremities, often compelling him to cry out;

a feeling of compression of the abdomen as if by a sight belt;

occasional cutting pains in the umbilical region, followed by sudden diarrhœa and vomiting (crises gastrigues);

formication and coldness in the legs and feet.

He was suspended every second day, increasing the time of suspension until it reached ten minutes. After the seventh suspension he began to get out of bed without assistance; after the eleventh he began to walk; after the sixteenth he was able to set down on a chair and get up without the assistance of his hands; after the twenty-second the lancinating pains decreased.

He was treated nearly ten months, and was suspended eighty times with the following results:

(1) the lancinating pains have disappeared; (2) he is now able to walk one-quarter verst continuously (three-sixteenths of a mile); (3) micturition is normal; (4) the bowels act normally; (5) there is less indican in the urine (probably because the bowels act well); (6) the crises gastrigues have ceased; (7) the sexual abilities have returned; (8) the muscular strength in the extremities has increased; (9) the analgesia of the lower extremities has improved; (10) the ataxic symptoms have improved; (11) the pupils are more moveable and less contracted; (12) he can stand up better with eyes closed.

The suspensions have had no effect on: (1) the knee-phenomenon, and (2) the promptness of the algesic musculo-cutaneous reflexes.

The third patient was a case of tabes dorsalis, complicated with emphysema of the lungs, enlargement of the heart, and arteriosclerosis. In consequence of the evident degeneration of the vascular system Dr. M. durst not suspend this patient, but applied extension to his lower extremities, in Volkmann's manner: The patient's bed was raised at the feet, so as to form an inclined plane. To the patient's feet was attached a weight, by means of a cord going over a pully at the foot-board of the bed. In this position the patient was left for days, and even nights, the weight being gradually increased to ten (Russian) pounds. After two weeks the patient ceased to complain of the lancinating pains. He is still under treatment, showing as yet no further improvement, except a slight increase of muscular power and better sleep.

The fourth case was one of neuritis multiplex, simulating polymyelitis anterior. The patient is yet under treatment, and shows considerable improvement in every respect.

Besides the above four cases, the following nineteen have been treated, namely:

Lateral sclerosis	3 cases.
Disseminated chronic myelitis	1 case.
Chronic meningo-myelitis	1 case.
Ischias rheumatica	1 case.
Disseminated sclerosis	1 case.
Tabes dorsalis	12 cases.

The treatment by suspension proved effective only in the cases of tabes; in all the others it neither helped nor hurt the patients.

In all the cases of tabes, except two, the improvement was more or less decided, especially with regard to the cessation of the pains and other paræsthesiæ, the increase of muscular power in the extremities, and the decrease of the ataxic symptoms. The two cases that were not benefitted were both recent cases, in the neuralgic stage of the disease. In one of them the limbs speedily lost their power, and in the other retention of urine set in; but even in these cases the pains were very much benefitted. The most prominent improvement was *always* in *all* cases, the disappearance of the pains, which did not even molest the patients during sudden changes of wind and weather, although, previously to the suspensions, they bitterly complained of the pains at those times.

When considering these results, the question naturally suggests itself: What is the relation of the spinal marrow, its meninges, and the nerve-roots to the vertebral column, during the state of suspension?

Thus far, Dr. M. has been able to investigate it, in a general way only on the cadaver. He exsected the spinous processes of the fifth and sixth dorsal vertebrae, taking care to injure as little as possible the muscular and ligamentous system of the spinal column. In the opening thus obtained the roots of the fifth and sixth nerves were seen to emerge from the dura mater in an almost horizontal direction, forming a little arch, with the convexity downward.

The cadaver being suspended, the nerve-roots assumed an almost vertical direction.

Before suspension the body measured one hundred and forty-five centimetres, after suspension one hundred and fifty-one centimetres. It therefore had stretched six centimetres. The spinal column proper, measuring from the second cervical to the fourth lumbar vertebra, had extended two and one-fourths centimetres.

Before suspending the body, the relations of the spinal marrow to the various parts of the spinal column had been marked with ink. This made it possible to institute a comparison after suspension, according to the marks on the skin, the vertebrac, and the dura mater, which before suspension formed one straight line across the spinal column. The mark on the skin and the vertebræ after suspension was *fourteen millimetres* lower. "Although the tention in the nerve-roots was comparatively slight, but it seemed to me that I could distinguish a greater amount of tension in the posterior roots than in the anterior. Besides that, the tension in the cerebro-spinal fluid, surrounding the marrow, was considerably increased during suspension. That the removal of the two spinous processes had no influence on the lengthening of the body I ascertained by measuring and then suspending another body, without removing any parts of the spinal column. The second body was lengthened in the same proportion."

Merkel, Malgaigne, and Cruveilhier have ascertained that the total length of the human body increases during decubitus, as during the night's rest in bed up to two inches, and decreases on standing up. But the greatest extension is obtained by suspension.

Taking into consideration that about three centimetres of the total extension falls to the share of the lower extremities, it is probable that the nerves share in the general extention of the lower limbs, that is, that they too, are stretched. This stretching is no less than that which is done to the sciatic nerve in an operative manner. We may therefore compare the effect of suspension on the nerves to that of operative stretching of the nerve trunks, which causes dynamic changes in them. But as after suspension there is not only an arrest of the degenerative process, but undoubted improvement takes place in some symptoms, this latter could hardly be ascribed simply to dynamic influences on the peripheral nerves. In chronic degenerative processes of the central nervous system, functional improvement can, in Dr. M's opinion, take place only when the nutrition of the parts (not yet subject to irreparable destructive changes) is being re-established, whether directly, or indirectly, by collateral circulation. It is but recently that a correct view of the physiological pathology of tabes has been obtained. Adamkiewiez recognizes the disorganization of the blood-vessels as the immediate cause of the degenerative changes of the posterior white columns of the spinal marrow. Microscopical examination shows that the changes in the medullary tissues begin in small nidi (which afterwards coalesce) in the immediate neighborhood of a diseased vessel. It is easy to see, that if the yet unaffected tissue is nourished by collateral circulation, it may be preserved sound for some time and therefore continue its physiological functions.

We know that during suspension there is increased lateral pressure in the vessels, which also are probably stretched in length.

We ask therefore: Does not suspension increase collateral circulation in the as yet unaffected or only slightly affected blood-vessels of the posterior columns?

In view of the success obtained in the above chronic cases, one might be justified in hoping for still better success in recent cases; nevertheless the reverse was the case.

I am far from expecting that suspension will cure tabes dorsalis, but comparing the results obtained by operative nerve stretching, as witnessed by myself, with those above described, I cannot but prefer the method of suspension. I may here state, that in order to fully test my method, my patients were not treated pharmaceutically, but *only by suspension* It is also worth while to notice that this latter treatment does not prevent the patients from following their usual occupation; that it is not painful, and is without danger, where no contra-indications exist.

After suspension I have never witnessed any of the trophic disorders so frequently following upon operative nerve-stretching.

The following I consider as contra-indications to suspension:

(1) Diseases of the heart with disorder of compensation in its action; (2) Aneurism and angio-sclerosis; (3) Considerable emphysema of the lungs; (4) Caverns in the lungs and disposition to hemoptysis; (5) A history of apoplectic, epileptic, and epileptoid attacks; (6) Severe anemia, a disposition to syncope.

The suspensions should not be undertaken very frequetly—every other day, or even every third day, and in no case longer than ten minutes.

Where the suspensions were undertaken too frequently, (every day, or twice a day) or continued too long, say up to twenty minutes, the following consequences were noticed:

in one patient followed speedy loss of power in the lower extremities;

in some there appeared pain in the lumbar region or in the whole length of the spine;

some had vertigo, loss of appetite, drowsiness;

one had a small ecchymosis in the sclerotic of the eye;

one had retention of urine;

one, the fourth case above described, had tonic spasms in the feet. which, however, did not last long.

In conclusion Dr. M. states that his method of treatment was observed by the whole medical staff of the hospital—forty-four persons in all.

OPERATIVE TREATMENT OF TRACHOMA.*

BY I. N. CATSAUROF.

By far the greater number of patients afflicted with granular inflammation of the conjunctiva, especially those of the poorer classes where the disease is most prevalent, are utterly unable to retain the services of oculists. Therefore every general practitioner, and more especially in the provinces, is frequently called upon to treat this disease. It is a most thankless task, frequently exhausting the patience both of physician and patient, and leaving the latter but little the better for the treatment received.

Among the therapeutic measures ordinarily employed, astringents, caustics, and derivatives generally occupy the first place. In my own experience sulphate of copper and nitrate of silver are the most useful in *recent* cases. When the granulations are not excessive, the daily application of the cupric sulphate is decidedly useful, treating the eyes at the same time with an ointment made of iodoform eight grains and vaseline two drachms. This ointment I have also found very useful in older cases of trachoma, where it diminishes the distressing feeling of dryness in the eyes. Iodoform in powder does not act nearly so well, and even seems to favor the appearance of new granulations. When, however, the secretion from the conjunctiva becomes more abundant, degenerating into a catarrh, I lay aside the iodoform and the cupric sulphate and apply the argentic nitrate in solution. If there are ulcers of the cornea, I instil atropia, or more commonly hydriodate of hyoscine. Under this treatment most of the recent cases of trachoma do well. Unfortunately, however, this ordinary method of treatment has also its drawbacks. It is, for instance, necessary that the patient should visit the physician daily, which to some patients, on account of distance, or the interruption to their daily occupation, is next to impossible. I have tried to supply them with ointments containing cupric sulphate to be applied by themselves at their homes, but never with any degree of success in the results. Those patients that do make arrangements for continuous treatment generally stay away as soon as a partial improvement is obtained, being anxious to return to their bread-winning labors. Sometimes, also, we meet with cases which actually grow worse in spite of the most careful and appropriate treatment.

These reasons induced me to try to find some prompter method of treatment. Naturally I conceived the idea of removing the granulations by mechanical means, that is, operative measures. I therefore carefully ransacked medical literature on the subject, and found that as early as Hippocrates various operations had been tried, and that at the present day opinions are about evenly divided for and against the operative treatment of trachoma. I therefore resolved to follow a middle course, by confining my operative measures strictly to the *surface* of the conjunctiva, and thereby avoiding the danger of cicatrical contractions. I resolved to try the ancient operation of blepharosxysis, or scraping off of the granulations, which in the time of Hippocrates was used for a disease then known as psoraphtalmia, and which in description corresponds with what we now call trachoma. In modern times Bardenheuer has frequently removed granulations by means of a sharp curette and he has never seen cicatrical contractions follow the operation.

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* Read before the Yaroslaf Medical Association.

I do not wish to be understood as advocating curetting as a universal method for the treatment of trachoma. On the contrary, I employ this method by no means frequently, being guided in its selection by the following indications, which are based on my own observations in practice:

The granulations should be at least as large as the ova of frog-spawn.

They should not be pediculated, for in that case they are best removed with scissors.

They should be purely trachomatous in character, not consisting of swelled papillæ or lymphatic crypts of the mucous membrane.

The curetting should preferably be done in the absence of excessive hyperæmia or catarrh of the conjunctiva.

The operation is contra-indicated in diffuse trachoma, or where there is a decided tendency to cicatrization.

I use a small curette with sharp edges, slightly grazing the granulations, but never penetrating below the level of the conjunctival surface. Performed in this way the operation is painless.

The hemorrhage is variable, but generally insignificant and easily arrested. Cold compresses are applied to the eye after the operation. The reaction is generally quite insignificant—slight œdema of the palpebral integument, œdema and hyperæmia of the conjunctiva, and in two days an increased secretion of mucus. I use neither caustics nor astringents, for I consider the irritation produced by the operation favorable to a cure of the trachoma. I simply prescribe the use of a four per cent. lotion of boracic acid. If all the granulations have not been removed the first time, the operation may be repeated after cessation of the reaction. I never had occasion to perform the operation more than three times on the same patient. Decided improvement follows, but the operations do not conclude the treatment. They should be followed by the ordinary applications of cupric sulphate and iodoform ointment.—Extract from *Vratsh.*

CLINICAL REPORTS.

GLEANINGS FROM ANN ARBOR CLINICS.

Reported by Geo. F. Heath. M. D.

SURGICAL CLINIC AT UNIVERSITY OF MICHIGAN.

BY DONALD MACLEAN, M. D.,
Professor of Surgery and Clinical Surgery in the University of Michigan.

RESECTIONS OF SHOULDER AND ELBOW-JOINTS.

Dighton B., age thirty-two. Farmer and clergyman. Admitted to hospital December 11, 1882, About seven months ago patient lamed his right shoulder dipping water from cellar with a large bucket; the night following his arm pained him and during the following three months, had more or less pain in the arm and shoulder, pain was not so severe as to keep him from his farm work. He experienced but little difficulty in using his arm though favoring it in the heavier work. At this time, consulted a physician who diagnosed dislocation of head of humerus downward and with aid of four assistants and considerable force attempted to reduce it. No anæsthetic was used. Has suffered severe pain from that time. Shoulder has been extremely sore and swollen. Nine weeks ago he left his home in Dakota and went to the Sanitarium at Battle Creek and put himself under Dr. Kellogg's care. Efforts were made to reduce the inflammation and build up the patient but without avail. Four weeks ago the joint was aspirated and thick, translucent fluid drawn off, and again two weeks ago a quantity of yellowish fluid tinged with blood was drawn off and tincture of iodine injected. During past four weeks has been using hot fomentations over shoulder, these have given him considerable relief and have given him rest at night. In this condition he was brought by Dr. Kellogg to the hospital to consult with Professor Maclean.

Present condition: Very spare in flesh, anemic, general expression one of long suffering, appetite and digestion poor, and generally debilitated from loss of sleep and pain. Carries right arm flexed in sling, has no use of it in least. Can move fingers. Shoulder joint, red, conjested, swollen tense measuring six inches in diameter and seventeen and a half inches in circumference, suffers much pain.

December 12: Patient was brought before class and examined as best could be done by inspection. Dr. Maclean made diagnoses of disintegration of the structures of the shoulder joint, the result of inflammatory action. Operation deferred until patient has rested and in better condition.

December 13: As there was no hope of improvement by delay offered, the patient was anæsthetized and a longitudinal incision made on outer anterior aspect of arm similar to following case. The diagnosis was confirmed, the shoulder was filled with disintegrated tissues, shreds of muscle, bone and fatty tissues, mixed with broken down blood copuscles and serum, the debris measuring over three pints, the articular portion of humerus was free and removed, hemorrhage was quite profuse but controlled by pressure on the subclavian until the circumflex and other small arteries were secured, the glenoid cavity and the tissues on the floor of the wound together with the brachial vessels and nerves were in healthy condition, hence it was thought best to try and save the arm. About two inches of the humerus was destroyed and was exsected about a half-inch farther down the shaft. The wound was cleansed and a large sponge was bound tightly in the cavity made to prevent oozing. No sutures used. He suffered considerable pain from shock, but rallied. I abstract the following from the hospital case-book:

December 13: Evening—Very weak, some capillary hemorrhage which was checked by styptics.

December 14: Sponge removed, was saturated with pus and several blood clots in wound. At 8 P. M., felt quite comfortable, later in the evening there was considerable capillary hemorrhage, styptics did not control, checked finally by tampon'of sponge, well wrung out in turpentine. Has taken nourishment of beef tea and milk and borne well.

December 15: Still very weak, temperature and appearance of arm good.

December 16: Thinks he is feeling better this morning, but he is manifestly growing weaker and failing gradually; cannot retain food on stomach, stimulating enemas given but system does not respond. He died at 2 A. M. on the 17th, of exhaustion. Following is the record of pulse and temperature:

		TEMPER'TURE	PULSE		TEMPER'TURE	PULSE
Dec. 12	9 A. M.	100¼	120	7 P. M.	101¾	120
13	8:45 "	99½	116	5:45 "	100	140
14	9 "	100 1-5	140	9 "	103⅓	135
15	9 "	99 1-5	156	7 "	101	130
16	9 "	101 15-	130	7 "	103 3-5	125

Kimball McC., age thirty. Lumberman. Admitted to hospital December 3, 1881. On October 8 last, was struck by a shot from a forty-four calibre Winchester rifle, the ball striking left arm from behind less than an in chabove the olecrenon process, passing downwards through the joint making its exit about one and a half inches below on the anterior surface of the forearm. Severe hemorrhage followed, the brachial artery being wounded, which was checked by friends only after patient had become decidedly faint. There has been a constant discharge from the wound of watery pus and it has no inclination to heal. Ten or twelve days after the accident, went hunting, from this exposure an inflammation was started in which all the tissues of the joint became involved; arm became very painful and joint swollen, and during the past three weeks several small pieces of bone have been discharged from the anterior opening.

On admission: General health fair though somewhat debilitated from continual pain. The elbow joint somewhat swollen, two discharging sinuses represent entrance and exit of ball, in both of which the probe comes into immediate contact with the necrosed ends of the humerus; radius and ulna thickened and rough by new formations of bone. No aneurism; the joint is anchylosed and arm slightly flexed, radial pulse absent.

After a few days preparatory treatment, the patient was placed under chloroform and the joint resected.

Incision was made about six inches in length on the posterior aspect of the joint down to the bone; the tissues then parted, the ulnar nerve carefully dissected aside and flexion of the joint revealed the following condition:

The inner and inter condyles of the humerus were split off by the ball and lying loose in the joint; the articular cartilages were destroyed and the lower end of humerus and heads of radius and ulna completely disorganized, presenting a soft pulpy appearance. The diseased portions were ensected, the wound cavity cleaned of all debris, a counter opening made in inner surface of joint, and a hair braid passed through to aid drainage. The incision was then closed by silk sutures. The use of Esmarch's bandage had prevented any loss of blood and only one small bleeding point was it found necessary to secure.

The same evening temperature was 102½; pulse, 104. The case progressed slowly, the wound was carefully dressed twice daily and the arm supported in pasteboard splints. Temperature, up to January 8, ranged from normal up to 100°, pulse averaging about 120; after this temperature was normal.

January 8: Passive movements begun.

January 12: An abscess due to irritation, caused by movements pointed at back of joint and opened by the attendant giving free discharge.

January 14: Can flex and rotate forearm slightly.

January 18: Motion more free in joint. Can carry the fingers of left hand to mouth.

February 14: Considerable swelling and irritation in the joint due to effusion and suppuration. A free incision made to-day and poultices ordered, passive movements suspended until soreness subsides.

March 4: The biceps and triceps muscles filling out gradually with consequent increase of control over joint. No pain. A probe introduced into the sinus struck a piece of dead bone, but impossible to remove it with the forceps, it came away March 6, during the morning dressing.

March 8: Some indication of returning radial pulse.

March 22: Dismissed cured. Since his departure, have been unable to hear from him directly, but through others that he recovered a very useful arm.

Mrs. L. Y. H., age fifty-three, admitted to hospital July 14, 1881. Always strong and healthy, and for a few years past quite fleshy. On the eighteenth of April last. while standing on door steps about to enter her house, suddenly felt faint and turning to one side, fell, striking against the steps and falling upon her left side, injuring her arm from elbow to shoulder. She was removed to the house and a physician summoned, who upon examination pronounced it a dislocation of head of humerus and attempted to reduce it; he said he had done so and that the arm would be all right in a few days.

Ten weeks passed by and arm remained very painful and steadily getting worse, could not use it in the least and about July 1st sent for another physician, who after an examination also pronounced it a dislocation of head of humerus and aided by a brother physician attempted to reduce it and failed, but discovered that there was a complication of fracture. In this condition she was brought by the physician to this clinic.

At present, shoulder somewhat swollen and very painful, the pain extending to the elbow, posterior aspect of arm discolored, cannot move arm in least without aid, can move her fingers with pain she is very anxious to submit to any measures for relief.

July 15: Chloroform was administered and examination made by Professor Maclean. Dislocation of head of humerus and fracture from crepitus easily made out. Resection offering the best chances of relief was quickly determined upon. A longitudinal incision was made in anterior outward aspect of shoulder, extending from coracoid process down the arm between three and four inches, dividing the deltoid longitudinally and down to the joint; some strong adhesions were broken up. The head of the humerus found fractured and deep in the axilla pressing upon the brachial plexus, a fragment of detached bone also removed, the fractures to all appearances, of recent date. The arm was sharply flexed and the humerus above the surgical neck exsected. The wound was then cleansed and dressed. No vessels were wounded and no ligatures used.

Patient recovered rapidly from the first, no shock or unpleasant symptoms or complications, pulse went up to 102 and temperature to 102¾ one evening, but a free course of quinia alternated with salicylic acid promptly reduced both. The wound was dressed twice daily, and drainage tube used for a few days to facilitate discharge.

July 23: Stitches all removed and wound healing rapidly. The extreme pain disappeared from date of operation and by July 25 was entirely gone, arm now resuming natural color and feeling, sensation natural, can use her left hand, has begun passive movements, and to-day raised her hand to her mouth for first time in three months.

August 20: Was discharged cured. In July, 1883, she writes: "My general health is good; my arm is so I use it a considerable; do my own washing, housework, etc., etc."

M. L., age thirty-eight. Keeps restaurant. Admitted to the hospital January 9, 1883. Was struck by a shot from a Winchester rifle last September, the ball striking the left elbow anteriorly opening the joint and fracturing the alecronon process in its exit. No hemorrhage of importance. Inflammation followed and two small fragments of bone came away later. The wound healed rapidly but he has suffered extreme pain in joint ever since the accident, so much so as to injure his health and interfere with his rest at night.

Present condition: General health fair. Left elbow joint anchylosed, arm slightly flexed and useless, can move fingers, no inflammatory action in joint, and wound entirely healed, muscles of arm considerably atrophied from non use, considered a favorable case for resection.

January 15: Chloroform was administered and a longitudinal incision about five inches long made on posterior aspect of joint, firm bony anchylosis found and the parts bound firmly together by strong fibrous adhesions. The ulnar nerve was embedded in the mass and dissected out and drawn to one side. An inch of the humerus and the articulating surfaces of the radius and ulna were then exsected. The muscular tissues were soft and flabby, no blood lost and no vessels ligated, recovered from the operation without shock. The wound was first dressed on 17th and doing well and pain all gone.

January 25: Constitutional disturbance complicated with brain symptoms set it, was subject to hallucinations, could see all sorts of images on the walls and around his bed, worrying about his business and determined to go home; the wound ceased to discharge and warm poultices ordered. Quinine administered, the wound kept thoroughly cleansed, and a constant watch day and night kept over him. The symptoms gradually subsided and by February 1 he was nearly his former self. Temperature and pulse have been about normal since operation.

February 10: General health much improved, wound granulating and healing finely; passive movements begun. He gained steadily in use of his arm and on February 23 went home on business, contrary to Professor Maclean's advice and orders, as the weather was very cold and a part of his journey must be made by stage. The result was as expected, he suffered a relapse and was confined to his bed for some days on his arrival home. Under the care of his home physician he ultimately regained a useful arm.

[Note.—In the foregoing cases the dressings were at first, oil silk over the wound, sheet cotton next applied for protection and support held in place by roller bandages forms a very neat aseptic dressing, later when suppuration becomes established, valcum next the wound takes up the discharges, disinfects the wound and is very efficient. Wounds should be dressed at least twice daily. Passive movements were begun as soon as the healing process fairly sets in, regulated so as to not cause any undue irritation. In the elbow cases the arm is flexed at right angles as soon as convenient and a pasteboard splint well padded with cotton suspended by sling from the neck, will prove just the thing and be gratefully appreciated by the patient, as it will enable him to leave his bed, help himself in many ways, feed himself, hold newspaper or book, or take a "hand" in the table games.]

BOOK REVIEWS.

THE PRINCIPLES AND PRACTICE OF SURGERY: BEING A TREATISE ON SURGICAL DISEASES AND INJURIES. By D. Hayes Agnew, M. D., LL. D., Professor of Surgery in the Medical Department of the University of Pennsylvania. Profusely illustrated. Volume III. Leather; pages, 784. Philadelphia: J. B. Lippincott, & Co., 1883. For sale by Sheehan & Co., Ann Arbor.

This completes Agnew's Surgery and forms a valuable work. The author has had great experience, has been a close and thorough student, and has produced in these three volumes a practical treatise embodying his great experience and extensive studies. To the student the work will be especially valuable on account of its great practical nature.

The third volume contains chapters on the following subjects: (1) Surgical diseases of the larynx and trachea. (2) Diseases and injuries of the nose, the naso-pharyngeal region, and the associated parts. (3) Diseases and injuries of the eye and its appendages. (4) Diseases and injuries of the ear. (5) Malformation and deformities—tenotomy in the treatment of orthopœdia. (6) Affections of the muscles, tendons, bursæ and aponeuroses. (7) Surgical affections of the nerves. (8) Surgical affections of the lymphatic system, skin and subcutaneous connective tissues. (9) Syphilis. (10) Tumors. (11) Diseases of the mammary gland. (12) Electricity in its application to surgical therapeutics. (13) Operations for nerve-stretching. (14) Massage.

It will be interesting to call attention to a few points. In discussing glandular hypertrophy of the larynx, attention is called to the general condition and habits of the patient. It is most frequently observed among those of sedentary habits, and too much reliance must not be placed upon local treatment.

The author differs from Mackenzie and others in holding that true croup and diphtheria are distinct diseases. This point is supported by some very weighty arguments, some of which we will quote:

"Idiopatic croup.	Diphthertic croup.
Almost always a disease of childhood.	Occurs at all ages.
Second attacks rare.	Not uncommon.
Hereditary tendency marked.	No influence.
Generally sporadic.	Generally either endemic or epidemic.
Not traceable to specific local causes.	Frequently traceable to such causes as bad drainage and poisonous exhalations.
Incapable of extension by personal communication. In other words neither infectious nor contagious." etc.	Both infectious and contagious.

Tracheotomy is strongly recommended in threatened asphyxia in croup.

Dr. Agnew does not regard excision of the larynx as a very promising operation. He gives a table of all the excisions reported up to date and sums it up in the following paragraph:

"Of the thirty-six tabulated cases of complete extirpation of the larynx, thirty died and six recovered, a mortality (recovery?) of nearly seventeen per cent. Of the six reported cured, one is living at present, having been exempt from any return of the disease (sarcoma) for over six years, and the operation must therefore be accepted as a success; one at the time of the report had passed twenty months free from recurrency; a third ten months; one, nine months; two, respectively four and six months. The periods four, six and nine months are too brief to justify the expression of any opinion as to the probable reappearance of the original disease. In three of those living the growths were sarcoma or papilloma; in the remaining three, carcinoma."

The chapter on diseases of the eye is very complete and is equal in value to many of the smaller works devoted exclusively to that subject.

The table giving the list of reported cases of nerve-stretching is extensive, but not complete.

The chapter on syphilis is very good. However the historical notice of the disease closes with the following paragraph which reads a little strangely in a new scientific volume: "Syphilis, therefore, may be regarded as a prehistoric disease, and we may believe that it dates back in origin to that period when the race, overtaken by a great moral disaster, lost its primeval purity and physical perfection."

The author seems to be certain that the race once possessed "purity and physical perfection."

As to the opposing views of dualism and unicism held by siphilographers, the author, after impartially stating the arguments on both sides, gives his own views as follows:

"In deliberately weighing the testimony of these two opposing sects, I discover nothing which induces me to modify the views which I have constantly maintained on this subject and which were formed after an experience of twelve years in the venereal wards of the Philadelphia Hospital, an institution unusually rich in cases of this class. My own views may be summarized as follows: (1) That the syphilitic virus is a purulent secretion containing some subtile material, possibly a particle of living matter, and that pus charged with this material is capable of producing under favorable circumstances, either chancre or chancroid. To this extent, therefore, I am a unicist. (2) That chancre and chancroid are the products, the former of this supposed gerimal matter, and the latter of the purulent component of the secretion. (3) That hard chanchre alone can become generalized or produce constitutional symptoms, chancroid being simply a contagious local lesion, without any power to cause constitutional infection. The possibility of converting a chancre into a chancroid, or *vice versa*, I have no reason to doubt; but to effect the first it is necessary to introduce, either intentionally or accidentally, an inflammatory element of a high or suppurating grade, by which the specific qualities of the lesion will be destroyed and the sore converted into a soft ulcer or chancroid; to effect the last, that is, the transformation of the chancroid into a chancre, it is requisite that the former shall have a new inoculation with the original virus of the latter."

It seems to us that this is really a dualism. The chancre is due to the specific germinal matter, and the chancroid to the purulent fluid in which the specific germ lives. When the specific germ is not present, or being present is rendered inactive by the highly inflammatory grade of the purulent matter, as Dr. Agnew supposes, chancroid will invariably be produced.

We are sorry to state this very valuable work is mared by some minor but inexcusable inaccuracies which should be remedied in the next edition. Especially are these noticable in the figures. Thus 9 is 4 per cent. of 225 and not 8.6 per cent., as given on page 437. 216 is 96 per cent. of 225 and not 91.4 per cent., as given on the same page. 44.7 on the same page should be changed to 44.44. 87.08 on page 39 should be changed to 87.80. 60 on page 36 should be changed to 73, provided the other figures are given ;correctly. On page 75 the following sentence occurs: "Of the 36 tabulated cases of complete extirpation of the larynx, 30 died and 6 recovered, a *mortality* of nearly 17 per cent." This should read a *recovery* of nearly 17 per cent., etc.

A TREATISE ON THERAPEUTICS, COMPRISING MATERIA MEDICA AND TOXICOLOGY, WITH ESPECIAL REFERENCE TO THE APPLICATION OF THE PHYSIOLOGICAL ACTION OF DRUGS TO CLINICAL MEDICINE. By H .C. Wood, M. D, Professor of Materia Medica and Therapeutics, and Clinical Professor of Diseases of the Nervous System in the University of Pennsylvania; Physician to the Philadelphia Hospital, Member of the National Academy of Science, etc. Fifth edition, revised and enlarged. Philadelphia: J. B. Lippincott & Co., 1883. For sale by Sheehan & Co., Ann Arbor.

This work is an honor to American medicine. It has been said that we are superficial in our studies; but even the painstaking, thorough German has not produced a work on the same subject equal in thoroughness to the one now before us. It seems that every trustworthy source of knowledge has been studied, and the various statements are carefully weighed and given proper emphasis. We know that in England and in the English schools, "Wood's Materia Medica and Therapeutics," takes high rank. It is a condensed encyclopœdia of knowledge in one of the most important branches of medicine. To the student it is invaluable, and while smaller books may be used for beginners, this text should be the chief guide to the student. We have used it ever since the appearance of the first edition, and have found no other text on the subject equal to it. Too much cannot be said in praise of the work. Indeed the text is without a rival. However it is the chief duty of the reviewer to point out any defects. These are few. In the first place, we wish that the author would consider the resemblance in the symptoms produced by arsenical poisoning and those which sometimes occur in pernicious malaria, or "congestive chills." The similarity of arsenical symptoms to those of cholera is pointed out, but cholera very rarely appears among us, while pernicious malaria is likely to occur at any season (unless it be midwinter) in almost any part of the United States. Compare the symptoms of pernicious malaria as given so graphically by Dr. Geo. B. Wood with those which may occur in arsenical poisoning, and you will be struck by the resemblance. We are not aware that any author has ever made the comparison.

The beneficial effects of cannabis indica in metorrhagia have been so frequently pointed out, and by such good authority that they should find mention.

We are especially glad to see that the author points out that it is the freshly prepared, deep-red colored nitro-muriatic acid that is valuable, and not the golden-yellow acid which is recommeded in the pharmacopœia.

On page forty-three occurs the following statement: "Notwithstanding all the care of modern pharmacy, bismuth even yet *occasionally* contains arsenic etc." As shown in our August number, *all* the samples of bismuth examined contained arsenic. The presence of this impurity is the rule and not the exception.

The suggestion that belladonna should be used in the obstinate constipation of chronic lead poisoning is a good one. The ordinary method of treating that trouble with soluble sulphates is not only useless, but is irrational and harmful.

The proof reading has been well done, but we noticed that a few mispelled words have escaped detection, as *othalmology* for ophthalmology on page sixty-three.

CLINICAL LECTURES ON DISEASES OF THE URINARY ORGANS, DELIVERED AT UNIVERSITY COLLEGE HOSPITAL. By Sir Henry Thompson, Surgeon Extraordinary to His Majesty the King of the Belgians, Consulting Surgeon and Emeritus Professor of Clinical Surgery to University College Hospital, etc., etc. Seventh Edition, Flexible cloth; pages, 190. Price, $1.25, Philadelphia: P. Blakiston, Son & Co., 1883. For sale by Sheehan & Co., Ann Arbor.

No one can speak with more authority upon the surgical diseases of the urinary organs than Sir Henry Thompson. As an operator in this specialty, his experience is probably larger than that of any other man now living. The work before us has now reached its seventh edition, and this is evidence that the author's views are generally sought for. The subjects are discussed in the form of interesting lectures, the coloquial style adding much to the pleasure of reading. No better idea can be given of the book in our limited space, than stating the subjects of the lectures, as follows:

(1) Diagnosis of urinary disease. Examination of the patient by questions and by instruments. (2) On some points relating to the structure and functions of the male urethra. (3) On stricture of the urethra and its nature, and on the diagnosis of urethral contractions. (4) On the treatment of stricture of the urethra by dilatation, simple and continuous. (5) On the treatment of cases of stricture in which extreme difficulties exist. (6) On internal urethrotomy. (7) Hypertrophy of the prostate and its consequence. (8) Relative to the employment of catheretерism for habitual retention from hypertrophied prostate. (9) Retention of urine. (10) Extravasation of urine and urin-

ary fistulæ. (11) Stone in the bladder. (12) On lithotrity, its history and on the instruments employed in the operation. (13) Directions for performing the operation of lithotrity. (14) Conditions of patients after lithotrity in general—results of the single sitting operation in particular, in regards, first, of mortality; secondly, of their subsequent condition. Resume of experience respecting it. (15) On lithotomy in men, women and children. (16) On the influence of renal disease on the choice of operation for stone in the bladder. (17) Early history of calculous disease, and the best treatment for its prevention. (18) On the treatment of stone in the bladder by solvents; its history and practice. (19) On the future of operative surgery for stone in the bladder. (20) On the operative means for the relief of patients suffering with long-standing retention of urine, mostly the result of prostatic hypertrophy. (21) On cystitis and prostatitis. (22) Diseases of the bladder; paralysis, atony, juvenile incontinence. (23) Tumors of the bladder; surgical operations for their removal, illustrated by cases. (24) The operation of exploring the bladder by perineal section of the urethra (digital examination) as a means of diagnosing obscure vesical disease and of removing the cause when it consists of tumor, encysted calculus etc. (25) Hematuria and renal calculus and the operations for removing it. (26) The examination of the urine for clinical purposes.

It will be seen that the majority of these subjects are of such a nature that they are not fully discussed in the works on general surgery nor those on general medicine. Their importance is great and all are here treated in the ablest manner.

POCKET THERAPEUTICS AND DOSE BOOK. By Morse Stewart, Jr., B. A., M. D. Third edition. Revised and enlarged. Detroit: Geo. D. Stewart & Co., 1883.

To the student and young practitioner, one of the most troublesome annoyances arises from his inability to remember the doses of the different remedies. It becomes almost a necessity for such a person to carry some ready means of refreshing his memory on this point. To students we would say that this is the most complete and valuable of all the dose books which we have examined. It gives the name and dose in both English andFrench terms, and the action of the remedy.

UEBER DIE WUNDBEHANDLUNG MIT NAPHTALIN, von Dr. Carl Bonning. Strassburg.

A valuable monograph, the substance of which, the author has already contributed to this journal.

THE BACTERIA. By T. J. Burrill, Ph. D., Professor of Botany and Horticulture, Illinois Industrial University, etc.

An interesting and valuable key to the study of bacteria.

THE BOOK OF PRESCRIPTIONS, containing upwards of three thousand prescriptions, collected from the practice of the most eminent physicians and surgeons, English and foreign, comprising also a compendious history of the materia medica, lists of the doses of all officinal or established preparations and an index of remedies and diseases. By Henry Beasley. Sixth edition, cloth; pages, 593. Philadelphia: P. Blakiston, Son & Co., 1883. For sale by Sheehan & Co.

The scope of this work is sufficiently indicated in the very lengthy title as given above. The good or evil that it will do will depend upon the hands into which it may fall. If the physician will consider these prescriptions as mere suggestions and nothing more he may get much good from them. But if he merely copies the prescriptions and gives them without considering the individual needs of his patient, he will probably do the patient much harm and himself more harm. He will degenerate into a mere copying machine. Each patient presents peculiarities which must be taken into consideration in prescribing for him. Cast iron formulæ cannot be used. On the other hand these prescriptions may be taken as mere suggestions for the use and combination of medicines, and if this is done the studious practitioner may get much good from them.

A POCKET BOOK OF PHYSICAL DIAGNOSIS, OF THE DISEASES OF THE HEART AND LUNGS. FOR THE STUDENT PHYSICIAN. By Dr. Edward T. Bruen, Demonstrator of Clinical Medicine in the University of Pennsylvania, etc. Second edition. Revised with additional illustrations. Flexible cloth; pages, 228. Philadelphia: P. Blakiston, Son & Co., 1883. For sale by Sheehan Co., Ann Arbor.

This is a plain, practical statement of the facts learned by physical examination of the lungs and the heart in health and in disease. The text is confined to these organs and does not attempt, as some other works on "Physical Diagnosis" do, to embrace the whole domain of medicine, including the analysis of urine. We say that the work before us does not attempt too much. The author makes no claim to originality, but takes pains to present the subject in the clearest manner possible. We can recommend the work to students.

THE ROLLER BANDAGE. By William Barton Hopkins, M. D., Surgeon to the out-door department of the Pennsylvania, Episcopal and University Hospitals, Demonstrator of Surgery in the University of Pennsylvania, etc., etc. Flexible cover; pages, 95. Philadelphia: J. B. Lippincott & Co. For sale by Sheehan & Co., Ann Arbor.

Probably the object of this work cannot be expressed in any better way than by reproducing the author's preface.

"The plan which has been adopted in this book, as will be seen at a glance, is to teach by numerous illustrations rather than by elaborate description the method of applying the roller bandage. In order that the student may familiarize himself with this very important subject, a series of illustrations are presented which were made in the following manner: Each bandage was applied to a living model, and whenever the roller pursued a course which the author has found in his association with students was the cause of any uncertainty, it was at once photographed. From these photographs accurate drawings were made by the artist, Mr. J. L. Wallace. In this way it is hoped that the intricate course traversed by the roller in the most complex dressing has been made sufficiently plain to enable the student to apply it for himself almost unaided by the text, etc." A useful work to the student of surgery.

A PRACTICAL TREATISE ON IMPOTENCE, STERILITY AND ALLIED DISORDERS OF THE MALE SEXUAL ORGANS. By Samuel W. Gross, A. M., M. D., Professor of the Principles of Surgery and Clinical Surgery in the Jefferson Medical College, etc. Second edition, thoroughly revised. Cloth; pages, 176, with sixteen illustrations. Philadelphia: Henry C. Lea's Son & Co., 1883. For sale by Sheehan & Co., Ann Arbor.

It is but little more than two years ago that we expressed our very high opinion of the first edition of this work. Within that time the edition has been exhausted, and the work has been translated into the Russian language.

The author calls attention to the fact—for fact it certainly is—that in impotence and spermatorrhœa there is commonly a lesion in the postatic portion of the urethra. This is too often overlooked.

We will simply add that the book covers a field in which there is need of special knowledge and does it in a thorough and practical manner.

QUIZ-COMPENDS: Anatomy, Dr. Potter; Visceral Anatomy, Dr. Potter; Physiology, Dr. Brubaker. Published by P. Blakiston, Son & Co., 1883. For sale by Sheehan & Co., Ann Arbor.

These consist of questions with answers. They are very well gotten up, and if they are used by the medical student simply to recall the knowledge he has gained by the practical study of anatomy and physiology, they may be of actual value. But if the student relies upon these books for his knowledge on the subjects, he had better give up medicine and turn to some narrower field of labor, in which he does not need to exercise any intellect. Then we say of these books that they are good or bad according to the way in which they are used. That they will be of some service to the conscientious student we do not doubt. That they will be popular with the indolent student who shirks his work in the dissecting room and physiological loboratory, we do not doubt.

ANATOMY, DESCRIPTIVE AND SURGICAL. By Henry Gray, F. R. S., Fellow of the Royal College of Surgeons, Lecturer on Anatomy at Saint George's Hospital Medical School, with an introduction on General Anatomy and Development. By T. Holmes, M. A., Surgeon to Saint George's Hospital, etc. The drawings by H. V. Carter, M D, late Demonstrator of Anatomy at Saint George's Hospital. Edited by T. P. Pick, Surgeon to Saint George's Hospital. A new American from the tenth English edition To which is added Landmarks, Medical and Surgical by Luther Holden, F. R C S, with additions by William Keen, M. D. Half Russia; pages, 1,028. Philadelphia: Henry C. Lea's Son & Co., 1883. For sale by Sheehan & Co., Ann Arbor.

It is altogether unnecessary to say anything in praise of Gray's anatomy. It is the *text* everywhere, has been for many years past, and will continue to be so long as it is revised in the thorough manner that manifests itself in the edition now before us. All the important recent advances in microscopic anatomy have been added and Holden's "Landmarks" are inserted.

A TREATISE ON FRACTURES. By Lewis A. Stimson, B. A., M. D., Professor of Surgical Pathology in the Medical Faculty of the University of the City of New York, etc., etc. Leather; pages, 598, with three hundred and sixty illustrations on wood. Philadelphia: Henry C. Lea's Son & Co., 1883. For sale by Sheehan & Co., Ann Arbor.

This is a thorough and valuable work discussing a subject of the greatest importance to the surgeon. In these days when such radical advances have been made in the treatment of fractures, the surgeon needs to be fully posted. This is necessary not only to the good of the patient, but for the protection of the surgeon. The law holds that the surgeon must do, not only the best he knows how to do, but the best possible. With Dr. Stimson's work and that of Hamilton on "Fractures and Dislocations," American surgeons have the best and most thorough teaching on this subject yet offered anywhere or by anybody.

SELECTED ABSTRACTS.

MEDICATED GELATINE IN THE TREATMENT OF SKIN DISEASES.

Pick of Prague has introduced this as a clean and convenient dressing, thus obviating the necessity for bandages or plaster to retain the application. The patient takes a bath, melts the gelatine cake in a saucer placed in a basin of hot water, applies it by means of a brush, and, when it is dry, paints over it a thin coating of glycerine. The latter prevents the dried medicated gelatine from cracking and chipping off, and also keeps it flexible, so that the joint movements are not interfered with. Unna of Hamburg, in conjunction with Beiersdorf, has improved upon this so far as to incorporate the glycerine with the medicated gelatine, and furnishes a large number of formulæ, embracing most of the remedies used externally in skin diseases. This plan is especially useful for the employment of chrysarobin in psoriasis. A five per cent. and a ten per cent. chrysarobin gelatine can thus be made: Gelatine five parts, glycerine ninety parts, chrysarobin five parts; or, Gelatine five parts, glycerine eighty-five parts, chrysarobin ten parts. To use this in psoriasis, the patient must first be washed carefully in a warm bath with soft soap to remove the scales, and then the melted gelatine painted on the patches. In severe cases this procedure is to be repeated every second day; in milder ones it is sufficient to do so twice or three times a week. All scale formation ceases on the patches so treated, the infiltration diminishes, and finally disappears entirely. The patches themselves become quite white; the border beyond, where the gelatine has extended on to sound skin, is colored violet. This coloration is due to the action of the secretions of the skin on the chrysarobin, and must not be confounded with the erythematous flush which this substance so often evokes. Pyrogallic acid can, in like manner, be incorporated with gelatine and glycerine, as ten of pyrogallic acid, twenty of gelatine, and seventy of glycerine. Pyrogallic acid is specially liable to decomposition, and Unna thinks that perhaps in this way it may be better preserved than in any other, particularly if the gelatine be kept in a closed vessel. Salicylic acid gelatine can be made either five per cent. or ten per cent. or twenty per cent., as. Salicylic acid ten, gelatine ten, glycerine forty-five, water thirty-five. It is especially useful in frost-bite of the ear, nose, and finger, and rapidly causes involution of the infiltration.—*Monatshefte fur Praktische Dermatologie.* —*Edinburgh Medical Journal.*

SALICYLATE OF SODA IN DIARRHŒA.

Dr. Calleza terminates an article on the pathology of diarrhœas, their clasification, and the use of salicylate of soda in fermentative diarrhœa, with the following conclusions:

(1) The products of the putrefaction of the materials which pass through the digestive canal cause not only a great number of diarrhœal states evidently idiopathic, but also many cases of secondary diarrhœa, in which a preëxisting disease has engendered a disposition to putrefaction, which is developed under the least abnormal influences.

(2) Salicylate of soda is the most efficacious agent for the prevention of putrefactive fermentation in the intestinal canal, without causing troubles of the normal metamorphosis of digestion. It should always be employed when there is a great fetor

of the stools, especially if this characteristic has been noticed at the commencement of the trouble.

(3) An amount varying from grains thirty to forty-five *per diem*, given in two or three doses, is sufficient to cause rapid cure of putrefactive diarrhœa, when it is idiopathic in the whole sense of the word.

(4) In those cases which are really secondary (and they form a very small number) salicylate of soda may also be used with advantage.

(5) In syphilitic and phthisical diarrhœas, and in those which accompany visceral abscesses—and especially abscesses of the liver—and dysentery, salicylate of soda has given the best results.—*L'Union Méd. du Canada*, July, 1883.—*Medical News.*

SUTURE OF THE MUSCULO-SPIRAL NERVE SIX MONTHS AFTER ITS COMPLETE DIVISION, WITH ENTIRE RESTORATION OF ITS FUNCTIONS ABOUT TWELVE MONTHS AFTER OPERATION.

The following instructive case under the care of Mr. Pick, is reported in the *Lancet:*

William C., aged thirteen, was admitted into the hospital on September 21, 1881. The history he gave was that six months prior to admission he received a stab from a pointed, half worn out table knife in the left arm, some little distance above the elbow-joint. The wound was dressed at home, and healed in about a fortnight's time. The boy was not seen by any medical man. According to his own account and also that of his mother, he was able to use his hand and arm as well as ever after the accident. Of this both the boy and his mother are quite positive. Shortly afterwards he began to notice slight dropping of the left wrist. At first he was able to extend the fingers, but in time all power of extension was lost and the wrist permanently flexed. Gradually the forearm became wasted and cold, and the loss of power more complete.

On admission there was found to be a cicatrix about four inches above and a little behind the external condyle of the left humerus. It was about three-quarters of an inch in length, and was not adherent to the bone or deeper parts. The humerus beneath seemed to be a little irregular and bossy, and pressure on the spot was attended with pain. The muscles of the forearm were wasted, especially the supinators and extensors. The wrist was dropped, the fingers flexed, and there was no power of extension. There was a sensible diminution of temperature over the forearm as compared with the other side. In the clefts of the fingers supplied by the radial nerve the temperature, as indicated by an ordinary clinical thermometer, was two degrees lower than in a corresponding position on the right side.

On October 6, 1881, an Esmarch's bandage was applied, and an incision about two inches long was made just below the cicatrix and in the course of the musculo-spiral nerve. The nerve was readily exposed. It was found to be completely divided, the ends being separated for about half an inch, and merely connected together by a little cellular tissue. The upper end was bulbous and enlarged, the lower end wasted and bound down to the subjacent bone. The latter was freed by dissection. Both ends of the nerve were refreshed (the bulbous neuroma being removed) and were sewn together with fine catgut suture. The wound was dressed antiseptically.

After the operation the boy complained of severe pain for about six hours. This, however, suddenly ceased in the evening of the day of operation, and he passed a good night. The wound was some time in healing—in fact, it was not completely healed for about a month. At the end of a fortnight there seemed to be some power of extension returning, but it was very slight. The boy stated that sensation was much greater than before the operation; but it was believed that he rather exaggerated his feelings in this respect, in dread lest another operation should have to be performed. There was no doubt, however, that the temperature of the limb gradually increased, for on his discharge from the hospital no difference could be detected upon comparing the two sides of the body.

The patient was kept under observation till December 23, when he was discharged with instructions to show himself at the end of three months. At this time the wrist was still dropped, but he could move his fingers slightly, and it was thought by some that the extensors were a little more developed than upon his admission. The supinator longus had not improved in the least, but had dwindled down to a mere cord, which could be pinched up with the finger and thumb.

Nothing more was seen or heard of the boy until July of the present year, when he was sought out and sent up from Epsom by Mr. Coltart for inspection. The functions of the nerve are now completely restored. Sensation is perfect, and all the movements of extension of the wrist and fingers are performed as well on the one side as the other. The muscles on the injured side are not quite so fully developed as on the sound side, but then it must be remembered that the injury was in the left arm, and that he uses the right one principally in his daily work. He seems to be unable to give any accurate idea as to when the improvement first became obvious to him, but from his account it would appear to be probable that there was no very marked change for at least twelve months after the operation. The bulbous end of the nerve, which was removed at the operation, was subjected to microscopic examination, and it was found that the enlargement was principally due to increase in the perineurium, but also partly to connective tissue growing up between the nerve bundles. The growth had caused the tubules to be pressed together, the axis cylinder having been completely atrophied.

CERTAIN PROOF OF THE SO-CALLED UTERINE MILK IN THE HUMAN PLACENTA.

The investigations of the author were suggested by an extraordinary case of edema of the placenta, which stimulated him to study the normal and pathological conditions pertaining to that organ. The question came forcibly before him as to whether the placental tufts are surrounded by blood or by milk. The advocates of the former hypothesis say that the tufts dip immediately into the maternal venous or dilated capillary spaces. The adherents of the latter, however, go too far in asserting that with the human female, as with animals, the nutritive material for the fetus is uterine milk alone. The experiments were made upon forty placentæ fully matured, and with many immature ones obtained from abortions at different periods. The material for examination was obtained by inserting a capillary tube into the space between the villi. Examined under a power of five hundred diameters, the following discoveries were made: (1) Red blood-corpuscles were seen varying between four and eight millimeters in diameter, varying also as to the intensity of their color. In the placentæ taken from the early months of pregnancy, they showed little inclination to *rouleaux* formation. (2) The white corpuscles were from five to ten millimeters in diameter and somewhat more numerous than in ordinary specimens of blood. (3) By far the greater extent of space was occupied by the so-called uterine-milk corpuscles, which are round, transparent, with an extremely thin outer membrane, which is slightly refractive, and have a diameter varying between one and twenty millimeters. They quite resemble the similar bodies which are obtained from the cow. They are paler than the corpuscles obtained from the secretion of the mammary gland, and look more like albumen corpuscles than like ordinary milk corpuscles. (4) The remainder of the field was occupied by free, clear, intercellular fluid. In addition were seen: (5) Free decidua cells of from twenty-five to fifty millimeters in diameter, with nuclei and nucleoli. (6) Round corpuscles of from one and five-tenths to five millimeters in diameter resembling red blood-corpuscles. (7) A few small bodies, of different shapes, some of them colored like hematin, and others colorless. (8) Occasional irregular forms and groups of pigment granules. (9) A few other bodies, azure blue in color, and irregular in shape, the origin of which is not known. From these examinations, the conclusion is that the nutritive material which is furnished to the fetus by means of the tufts of the placenta is composed of blood and uterine milk. As much as several cubic centimetres of this compound material was collected on several occasions. Allowing this to stand in a glass tube, the red corpuscles settled to the bottom, and above them was a stratum of uterine milk mingled with blood-serum. The latter was in thick flakes, opaque, and of a blue, opalescent appearance. The color of the material when first taken varies, in different cases, between a pale-rose and a cherry-red. As to the proportion between blood and uterine milk at the different periods of pregnancy, the author is unprepared to make a positive statement. Concerning the origin of this uterine milk, one must choose between the maternal blood and the decidua. After considerable investigation and reflection upon this subject, the opinion is reached that it is developed from the decidua cells. This opinion is supported by the similar one of Ercolani, who studied the subject in apes. The final summary is as follows: (1) The purpose of the decidua in animals and in the human female is to furnish to the fetus during its intrauterine life with a portion of the nourishment necessary for its growth. To accomplish this purpose, the serotina or decidua placentalis is developed into a special organ for the secretion of milk, and is cast off, after the birth of the fetus, as an integral part of the placenta. (2) The product of this organ, the so-called uterine milk, is secreted in the spaces into which the placental tufts dip. This secretion mingles with the maternal blood which is here extrasavated, and with it forms the nutriment for the fetus, which is appropriated by absorption through the placental tufts. (3) From the standpoint of comparative anatomy, the difference between the placentæ of the higher species of animals and the human being does not obtain, to the extent that has heretofore been insisted upon, as to the phenomena, which are manifest in their development. The manner by which the fetal nutriment is absorbed is to receive further investigation.—Hoffmann, (*Zeitsch. f. Geb. u. Gyn.*)—*American Journal of Obstetrics.*

KAIRIN.

This new antipyretic agent has been the subject of fresh and elaborate clinical researches by Paul Guttmann (*Berliner Klin. Wochen.* Number XXXI). The number of experiments made upon forty-two patients was seventy-two; cases of pneumonia, measles, phthisis, typhoid fever, scarlatina, pleurisy, peritonitis, erysipelas, ague, and septicæmia were investigated. The drug was administered whilst the fever was present, and not likely spontaneously to undergo alterations. The administration was begun in the latter part of the morning and continued till the end of the afternoon. In the majority of the cases the temperature ranged from 39.5° to 40.5° Centigrade, when the observation was begun. It was shown that kairin given in hourly doses of one-half to one gramme, was followed by a gradual fall in the temperature of the body, so that in from three to four and a half hours after commencement, in the majority of cases a considerable fall had taken place, and in several the thermometer showed a normal temperature. By repeated gramme doses of kairin the normal may always be attained according both to Filehne and Guttmann. The course of the downward curve is thus gradual. In many patients a notable degree of sweating was observed, especially in cases of phthisis. As the temperature falls the pulse becomes less frequent. No unpleasant symptoms were caused by the kairin, which was used freshly prepared; specimens which have been kept for some time may produce alarming symptoms, such as cyanosis and collapse. The antipyretic effect of kairan is not weakened through repeated use; each new dose is followed by the usual result. Kairin, like other antithermic agents, is not capable of shortening the disease or altering the symptoms. Discoloration of the urine sets in about twelve hours after the employment of the drug, and lasts generally about twenty-four hours. Compared with quinine, kairin acts more rapidly, but its effects are of shorter duration. Kairin, however, given in hourly doses of one gramme, after four doses has a more powerful and constant anti-febrile effect than quinine in doses of one and a half to two grammes. The higher price of kairin will probably postpone its extensive introduction.—*Lancet.*

HOT WATER IN THERAPEUTICS.

Several years ago I learned in my personal experience that no agent relieves nausea and vomiting so satisfactorily and promptly as water as hot as can be drank. Since then I have used it in a large number of cases, and it has been uniformly reliable. The following classification may be made of the cases in which it has been used.

(1) Cases in which nausea and vomiting occur at the onset or during the course of acute febrile disease.

(2) Cases in which these symptoms were caused by overloading the stomach when its functions had been impaired by protracted disease.

(3) Cases in which they were produced by nauseous medicines (not emetics) at the time they were taken.

(4) Cases of acute gastritis caused by the ingestion of irritants.

(5) Cases in which these symptoms were purely reflex.

(6) Cases of chronic gastritis.

(7) Cases of colic in newly-born infants.

(8) Cases of flatulent distension of the stomach.

Among the cases of class one was a case of diphtheria and one of puerperal septicæmia, as well as one of tuberculosis, in which the stress of the disease fell upon the digestive apparatus. In each of these a half-class of hot water always gave relief when every other remedy failed. The most impressive and permanent results of this remedy seem to be in cholera infantum—hot water being retained when everything else was rejected; and it would so compose the stomach that food could be given almost immediately afterward.

The nauseant medicines mentioned in class three are often retained if given in hot water as a vehicle. When an enormous quantity of whisky has been drunk, and the stomach will not tolerate anything else, hot water will be retained, and then food can be given.

Hot water is less satisfactory in vomiting of pregnancy, yet it is of considerable value in many cases.

In the various manifestations of indigestion, classed six, seven and eight—hot water is almost invariably followed by good results. In dyspepsia it may be given before each meal, as well as at other times, to cause the discharge of any undue amount of gas in the stomach by eructation. In this way it affords relief to young infants suffering colic, and it is rarely necessary to prescribe anything else. It has been used successfully in a case of severe palpitation of the heart from dyspepsia.

The decongestive and hemostatic action of hot water have been variously accounted for by gynecologists. Dr. Pitcher, of of Detroit, thought that when applied to a bleeding vessel, the immediate effect is dilatation, which sufficiently slows the current to form a clot; and constriction occurring, afterward, the clot is firmly held and the lumen of the vessel closed.

Dr. Emmet says that the direct result is relaxation of the coat and vascular turgesence; afterward, if continued, reaction follows and contraction occurs.

Carl Richter, of Berlin, thinks "the contact of the hot water with the partially denuded inner wall of the uterus causes a slight inflammatory irritation, and œdematous transudation, and a swelling of the tissues, principally the submucous, intermuscular, and perivascular connective tissue, by which the blood vessels become compressed and their lumina thereby occluded."

The action of hot water upon the uterine or gastric mucous membrane or upon abnormally full or bleeding vessels in any part of body, may be readily and simply explained by a well-known physiological principle, namely: That of watching a frog's foot while a needle is drawn across without injuring the membrane. The vessels will presently contract and close, and after remaining so for a few minutes, will dilate to respond no more, or only partially, to such stimulus. With a stronger stimulus, as that of gentle heat, they will again contract, and such contraction may be lost a day or two.

Wharton Jones found that cold causes speedy constriction, quickly followed by dilatation.

Beaumont, in his observations on Saint Martin, found that the ingestion of cold waters was followed by blanching of the gastric mucous membrane, quickly followed by more than normal redness. Now, from whatever cause nausea and vomiting may arise—from the direct contract of an irritant, or the effect of an emetic, or from reflex nervous influences, it is certain in many instances, and probable in all others, that the vaso-motor centers controlling the gastric blood supply are also influenced and gastric hyperæmia produced; and this condition being the link in the casual chain which is broken by the contact of the hot water on the gastric lining, the effect fails to follow.

In flatulent distension of the stomach, the muscular coat, impeded by the gaseous pressure, is excited to extraordinary work, and the gas is expelled. Patients who begin taking hot water to allay nausea, cannot only take large quantities without inconvenience, but get to liking it; and at times, when little or no water can be taken, by drinking it hot, enough can be retained to fully meet the requirements of the organism. This fact has an important bearing in therapeutics. Often in both acute and chronic diseases, the issue depends solely on the amount of work that the kidneys will do. In many diseases, the structure of these organs, though not primarily affected by the morbid process, is liable to damage secondarily. The injury may be due rather to the concentration of the urine—the small amount of water—than to the absolute amount of solids; so that the kidneys become clogged with destructive, effete matter if sufficient water fails to flow through them. But dilution of the urine is not the only good resulting from the free drinking of water. The skin is put to work and carries of a large portion of the effete matter that would otherwise have to pass through the kidneys.—Dr. Douglas Morton, in *Louisville Medical News.*

THE STATE OF THE UTERINE MUCOUS MEMBRANE DURING MENSTRUATION.

Besides Wyder (*Ztschr. für Geburtsh. u. Gynäk*, Volume IX, Number I), the names of Kundrat, Engelmann, Williams, Leopold, Möricke, and de Sinéty may be mentioned among those who have made investigations upon this subject. All of them agree that the uterus is deprived of its epithelium during menstruation, and is converted into a wound-like surface. The disagreement is as to the extent of the exfoliation. Williams concludes that there is a complete loss of the mucous membrane of the uterine body, and a laying bare of the muscular tissue. Kundrat, Engelmann, Leopold and the author are of the opinion that only the superficial layers of the mucous membrane are shed. The four authors first mentioned believe in a fatty degeneration of the menstrual mucous membrane, all considering it as the primary and principal factor in producing the hemorrhage, while Leopold on the other hand, considers it (the fatty degeneration) as secondary to and dependent upon the hemorrhage, the latter being caused by excessive dilatation of the capillaries of the uterine mucous membrane, with relative insufficiency of the veins. Regeneration takes place, according to the author, from the layers which have not been shed. and which are in a condition of cell hyperplasia. Neither Möricke nor de Sintéy admits that there is a loss of mucous membrane during menstruation, or fatty degeneration, to a very great degree, the process being largely limited to congestion and diapedesis. The author proceeds to the analysis of eight cases, with special reference:

(1) To the condition of the superficial and glandular (uterine) epithelium.

(2) To the kind of hemorrhage which occurs during menstruation and the method of its occurence.

(3) To the condition of the mucous tissue, particularly the interglandular substance. He accords to Möricke the credit of having established the following points:

(*a*) That during menstruation portions of the mucous membrane of the body of the uterus are undisturbed.

(*b*) That the teaching of Kundrat, Engelmann and Williams concerning a primary fatty degeneration of the uterine macous membrane is no longer tenable.

(*c*) That the superficial and middle layers of this membrane do not suffer conversion into a decidua. His own views are summarized as follows:

(a) During menstruation a portion of the superficial layer of the mucous membrane disappears, the rest remaining. This shedding process varies in extent in different cases, now evoking the entire superficial layer (Leopold, Wyder), again taking only a small portion of it (Spiegelberg). The elements which are thrown off are partly detritus and partly undecomposed matter. In some cases, as dysmenorrhœa membranacea, small mucous shreds are found, which, however are too small to cause dysmenorrhœa.

(b) This process of shedding is caused by the hemorrhage of menstruation, and not by primarry fatty degeneration.

(c) The superficial and middle layers of the mucous membrane, which are left behind, show an abundance of small cells, but no similarity to the decidual membrane of pregnancy.

The deepest layers show a cell-hyperplasia of the interglandular tissue, the evident mission of which is to furnish for the tissue which is lost during menstruation.

(d) The degeneration of the superficial epithelium is participated in, as well by the glands as by the surrounding membrane in which they are imbedded.—*New York Medical Journal.*

PRE-HISTORIC MAN.

The *Union Medicale* of June announces a discovery of the highest scientific interest, and which, if it turns out to be real, will show that pre-historic man is no longer a myth. On piercing a new gallery in a coal mine at Bully-Grenay, a caveren was broken into containing six fossil human bodies intact —a man, two women and three children—as well as the remains of arms and utensils in petrified wood and stone, and numerous fragments of mammals and fish. A second subterranean cave contained eleven bodies of large dimensions, several animals and a great number of various objects together with precious stones. The walls were decorated with designs of combats between men and animals of gigantic size. A third and still larger chamber appeared to be empty, but could not be entered in consequence of the carbonic acid it contained, and which is being removed by ventilators. The fossil bodies have been removed and brought to the surface, and five of them will be exhibited at the *mairie* of Lens; the others are to be sent to Lille in order to undergo examination by the Faculty des Sciences.

TREATMENT OF PUERPERAL CONVULSIONS BY HOT BATHS.

In a paper by Dr. Carl Brens in the *Archiv fur Gynæcologie*, is given an account of eleven cases of puerperal convulsions treated by diaphoresis produced by means of hot baths. Other means, as the inhalation of chloroform, and the administration of chloral hydrate were also employed. The convulsions set in at different periods during labor, and in the course of the first day after delivery. In four cases they came on at the beginning of labor, in two after the first stage had lasted some time, in one during the second stage, and in four a few hours after delivery. Only one of the eleven cases died. There was present in all the cases albuminuria, together with more or less œdema. The baths were employed after the convulsions set in, during and after labor. A case is also mentioned in which forty-five hot baths were given during pregnancy. The author believes that the immediate danger to life in these cases is due to the diseased state of the blood—hydræmia—shown by the albumen and anasarca; and that the rational treatment of this condition consists in the production of a rapid change in the blood state. This he believes is brought about by profuse sweating, which, he states, diminishes the quantity of albumen in the urine, and the œdema. The hot baths have occasioned no bad symptoms in the author's practice; they have not brought on premature labor when used during pregnancy, nor have they occasioned hæmorrhage when employed soon after labor.—*London Lancet.*

MISCELLANEOUS ITEMS.

W. C. Scholl, M. D., of Irvine, Kentucky, has the following to say concerning Celerina: I have used the Celerina myself, and derived so much benefit from the small quantity that I feel anxious to continue its use. I have suffered for several years from nervous prostration, and I am induced by the trial of the sample to believe that Celerina will relieve me entirely.

George J. Engelmann, M. D., Professor of Obstetrics in the Post-Graduate School of the Missouri Medical College, thus commends Listerine: "In the sick-room, especially the lying-in chamber, Listerine answers a most excellent purpose as a disinfectant, purifying the atmosphers, and removing the offensive odor without substituting one almost equally disagreeable, as is the case with many of the remedies in use. As a mouth-wash, properly diluted, it is reliable and agreeable; diluted with water or glycerine it speedily corrects certain fermentative forms of indigestion, and is of more or less service in the catarrhal conditions of all mucous membranes. "The happy effect of Listerine upon these less sensitive tissues, and the favorable reports of chemical and microscopical tests, emboldened me to try the new antiseptic in abdominal surgery, as I rather dread the effects of carbolic acid upon raw surfaces, and especially upon the peritoneum. In a most desperate and important ovariotomy it was used throughout, in the spray (full strength), for cleansing sponges, body, etc., and finally upon the pedicle, which, large and unwieldy as it was, was dropped; in the post-mortem examination this was found in a most excellent condition, as were all the other parts, especially the peritoneum, and the abdominal incision had united by first intention. In a case of Battey's operation, I used Listerine with equal freedom—three sprays constantly at work—but, as is my habit, not directed over the wound. On account of incessant bleeding from the stitches, much sponging of the abdominal cavity was necessitated, and the result was as favorable as could possibly be expected. The abdominal incision united by first intention, and the patient recovered with but a very moderate peritonitis. I cite these cases more in detail in order that they may serve as a guide, and encourage others to try Listerine more fully in abdominal surgery."—*Obstetric Gazette.*

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ORIGINAL ARTICLES.

EPITHELIOMA OF THE TONGUE: EXCISION.*

BY F. J. GRONER, B. S., M. D., BIG RAPIDS, MICHIGAN,
Surgeon to Mercy Hospital.

Mr. President and Gentlemen: The majority of the members of this society examined a case of epithelioma of the tongue at our last meeting in Big Rapids. As I have that tongue with me to-day I know you will have especial interest in this report.

James McGill, age fifty, born in Scotland, entered the hospital July 9, 1883. No malignant or hereditary disease in the family. Patient always had good health. Three months before coming to the hospital he discovered a small crack and hardness a little in front of the middle and to the right of the median line of the tongue. The growth continued and when examined by myself the fissure was one and a half inches long and one-half inch deep; tongue very much indurated, thickened, and the disease involved nearly the entire organ. There was occasional darting pain, fissured portion tender, eating was difficult, and speech thick and indistinct. I informed the patient that internal treatment and topical applications would be fruitless, his only chance for recovery was by complete extirpation, and this would be questionable on account of the extent of the disease. After hearing a similar opinion from several prominent members of this society, the patient was very anxious to have the operation performed.

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* Case reported at a meeting of the Union Medical Society of Northern Michigan, held at Greenville, October 18, 1883.

July 20: Assisted by Dr. Burkart, my colleague in the hospital, and Drs. Griswold and Cutter, I extirpated the entire tongue. I employed the method of Dr. Whitehead, as given in the Section of Surgery of the International Medical Congress, 1881, of removing the tongue through the mouth with scissors. "The operation is conducted in six stages after the following simple manner: (1) The mouth is opened to its full extent by a suitable gag; and the duty of attending to this is entrusted to one of two good assistants required. (2) The tongue is drawn out of the mouth by a double ligature passed through its substance one inch from the tip. (3) The operator commences by dividing all the attachments of the tongue to the jaw and the pillars of the fauces. (4) The muscles attached to the base of the tongue are then cut across by a series of successive short snips of the scissors until the entire tongue is separated on the plane of the inferior border of the lower jaw, and as far back as the safety of the epiglottis will permit. (5) The lingual or any other arteries requiring torsion are twisted as divided. (6) A single loop of silk is passed by a long needle through the remains of the glosso-epiglottidean fold of mucous membrane as a means of drawing forward the floor of the mouth should secondary hemorrhage take place."

Anesthesia was produced, the patient was supported in a sitting position with head bent forward so as to allow the blood to flow out of the mouth, instead of into the trachea as it will do when the tongue is drawn strongly forward. The only artery that gave any trouble was the right lingual. Several attempts were made to catch it with short artery forceps, but on account of the very poor light the attempts failed, and the hemorrhage was arrested by wringing a sponge from hot water, dipping in turpentine and pressing on the bleeding point. The hemorrhage is so slight when the cutting is done with scissors that I think it not necessary to perform the difficult operation of tying the lingual arteries as recommended by Billroth. I much prefer the scissors to the galvano-cautery or ecraseur as you are perfectly sure of removing the entire organ. When this operation is once thoroughly known it will supercede all other methods of removing the tongue. With a tongue so thoroughly involved as this one, it would have been impossible to apply the ecraseur back of the disease without dissecting the tongue from the floor of the mouth.

But very little blood was lost during the operation, and the patient passed a very comfortable night.

July 21: Pulse, 114; temperature, 100¼°. Drank considerable milk, and rinsed mouth with an iced solution of permanganate of potash.

July 22: Pulse, 100; temperature, 100½°; complained of no pain and took a plenty of milk.

July 23: Pulse, 100; temperature, 100°; had a little diarrhœa. Ordered an injection of starch and tincture of opium and nourishment to be given per rectum, to prevent swallowing pus.

July 24: Pulse, 94; temperature, 100¾°; diarrhœa worse, ordered a powder of opium and acetate of lead.

July 25: Pulse, 88; temperature, 98¼°. Diarrhœa stopped, takes plenty of milk and egg by mouth and rectum.

July 26: Pulse, 90; temperature, 99°. Patient eats very well, and is in good spirits. Wound is healthy.

July 27: Pulse, 88; temperature normal. Patient shaved himself.

July 28: Patient walked from hospital to my office and back, distance two miles. Patient weighed one hundred and eighty-five pounds before the operation, and one hundred and eighty-one pounds two weeks after. From this time the wound healed rapidly. Patient left the hospital for his home in Muskegon August 15. At this time a small space about the size of a thumb nail was left unhealed. Every trace of disease seems to have been removed, and no evidence of glands involved. The latter we had reason to fear from the extent of the disease. It has long been recognized that early surgical interference in malignant growths is of special value. Dr. Gross sets forth the following reasons: "(1) Less risk of shock and hemorrhage; (2) The more effectual riddance of the diseased structures; (3) The diminished probability of septicæmia or blood-poisoning; (4) The avoidance of unsightly scars; (5) The less risk of recurrence of the morbid action either in the seat of the operation or in other parts of the body." These propositions are self-evident.

Examination of a section under the microscope showed the characteristic "concentric globes," or "epithelial nests."

I saw the patient August 25, at Muskegon. The wound was entirely healed, and patient said he would go to work on the following Monday.

To a letter of inquiry October 1, I received the following reply:

MUSKEGON, MICHIGAN, October 3.

DR. GRONER: On the right side of my neck the glands are somewhat swollen. Dr. Denslow thinks I caught cold—thinks it not serious. JAMES MCGILL.

The disease may return, but that we have relieved this man's sufferings and prolonged his life is no question. With such a rapid growth we would not expect him to survive to the date of this letter. I find in an analysis of cases in Agnew that the duration of the disease is forty-two weeks, where operation is performed duration is eighty-six weeks. One patient lived six years after the operation. So that under ordinary circumstances, and especially at the urgent request of the patient, this one chance for relief should not be refused.

PUERPERAL ECLAMPSIA.

BY C. M. DICKSON, M. D., BRANDT, OHIO.

On the evening of October 11, I was called to see Mrs. G., who was suffering from œdema, dependent upon pregnancy. I found her lying in bed, and unable to attend to her ordinary household duties. She stated that "she was a primipara, and expected to be confined about a month hence."

She was suffering from severe headache, with face moderately swollen, but her limbs swollen to their fullest capacity, with the vulva so much infiltrated, and the labia minora protruding to such an extent as to resemble bladders distended with air, and very sensitive to the touch—so much so, that an attempt to pass a catheter was attended with great difficulty, but was finally accomplished, and about two ounces of urine drawn off. This I put in a bottle and heated on the stove (had no HNO_3 with me) and found it to contain albumen sufficient to render it three-fourths solid.

I left the following diuretic mixture and returned home:

℞. Potassium acetate.............................. ℥ij.
Tincture digitalis.............................. ʒijss.
Aquæ, q. s ad.............................. ℥vi.
S. Teaspoonful every three hours.

At 1 o'clock that night I was again summoned to her side, the messenger stating that "she was bleeding from the mouth, and they were afraid she would choke to death before I could get there."

When I arrived she was lying quietly in bed but unable to speak. I soon learned she had a convulsion, and that the blood came from having bit her tongue. While trying to elicit more light upon the subject, the muscles of the face began to twitch violently, the angles of the mouth were retracted and fixed in a most horrible grin, with the tongue protruding and held fast between the set jaws; the eyes turned up under the eyelids, that only the white sclerotics were visible, the face changed in a moment from a death-like pallor to nearly black; respiration was arrested and frothy saliva poured from the mouth. The forearm was rigidly flexed and the woman assumed the opisthotonous position, and I, for the first time, witnessed an attack of puerperal convulsions; and as I recalled Professor Dunster's words upon this—the most formidable disease with which the obstetrician has to deal—my heart gravitated to the bottom of my boots! But this was no place for a man to lose his head, and after the first shock, I once more regained my wits, and proceeded to control the convulsions by chloroform, and a hypodermic injection of one-third grain of morphia. It passed off in about three minutes, but returned again in twenty minutes. There being no signs of labor, and the spasm returning every half hour, I deemed it necessary to induce it. I, therefore, sent for council (Dr. S. D. Hartman, of Tippecanoe City, being my choice). The doctor arrived at 5:30 A. M. but, as she had no more attacks for an hour, he advised that we wait for further developments, and gave it as his opinion that I had succeeded in arresting the paroxysms.' Upon his suggestion we gave the following formula to be repeated in a half hour if necessary:

℞. Elaterium .... gr. ¼.
Pulverized jalap............. .... gr. x.

Getting no result from these, we gave a pill containing two drops of oleum tiglii, which was repeated in an hour. After waiting three hours without any signs of action, we gave the following to be given every three hours until an evacuation was obtained:

℞. Jalap compound.................... .... gr. xlv.
S. Div. pulv. no. ix.

At 11 o'clock no action of the bowels had taken place, and we deemed it improper to persist in such heroic measures, and ordered a Seidlitz powder to be taken every three hours in their stead.

The doctor was obliged to leave me at this hour, and visit another patient who was lying at death's door, but promised to return at 3 P. M. He had scarcely been gone half an hour, when my patient, without any warning whatever, went into another covulsion. I gave another hypodermic injection of morphia, and chloroform was given just sufficiently to control the spasm, then suspended until the thumbs would clinch into the palms of the hand, and that *terrible* and peculiar hissing sound would warn me of impending danger. This state of affairs continued for some time when I gave the inhaler to the nurse, while I preceeded to give the following injection by rectum:

℞. Chloral hydrate.............................. gr. xx.
Potassium bromide......................... gr. xxx.

Upon giving the injection I was surprised to find it return immediately. I prepared another, and it was also rejected. I then made an examination per vagina, and found the head pressing down upon the floor of the pelvis. I put on the forceps and delivered at once and said "good-bye" to the convulsions. Hemorrhage was somewhat profuse but was soon checked by a hypodermic injection of ergotine.

I devoted an hour to resuscitating the child and finally succeeded.

At 3:30 P. M. the doctor again returned and congratulated me upon my success.

The baby had seven spasms, and each was like that of the mother, and what was more peculiar, *exactly the same number!* Atelectasis pulmonum gave us some trouble but was finally overcome. We gave it a teaspoonful of castor oil and it is doing nicely at present.

Before returning home I gave one-eighth grain of pilocarpin hypodermically.

October 13: My patient is resting quietly. Bowels have moved freely. Pilocarpin produced profused perspiration. Oedema of face disappearing, but limbs remain about the same. Her mind is more clear—so much so as to answer questions, but has no recollection of what transpired yesterday. Temperature, 101°; pulse, 68.

October 14: Still improving; temperature, 99°; pulse, 72. Ordered diuretic given as directed above. Also gave a three grain dose of sulphate of quinine three times per day. Vagina ordered to be washed out night and morning with carbolized water. Urine turbid.

October 24: The woman has made rapid progress, without any unfavorable symptoms up to this date. The albumen in urine has nearly disappeared—only a slight cloudiness remains. The diuretic was discontinued and the following ordered to be taken as directed for a month or six weeks:

℞. Tincture ferri chlorid.......................... ʒijss.
Syrup simple q. s.......................... ℥iv.
S. Teapoonful after each meal.

I also requested that a specimen of her urine be sent me for examination once each week for at least six months to come.

I wish to call attention to the low pulse which continued throughout this disease. It was down as low as forty, and has varied from that to seventy; but has not yet regained the normal.

A NEW SPLINT FOR FRACTURE OF THE LOWER JAW.

BY H. M. WHEELER, M. D., GRAND FORKS, DAKOTA TERRITORY

I was called July 1, to see G. B., a young man twenty-four years of age, who was thrown from a carriage a few moments before and had received a double fracture of the lower jaw. One fracture extended transversely across the body of the bone on the right side at the second bicuspid tooth and the other across the ramus upon left side. All efforts to put up the jaw with ordinary splints, that is, gutta percha and Parson's splint material, assisted by a fan-tailed bandage, proved unavailing, as did plaster of Paris, the loose fragment would move backward and to the left in spite of me. I then had a splint constructed of ordinary hoop iron composed of a semicircular piece which passed around the back part of the head from near the outer angle of the orbit to a like situation upon the other side. This was well padded and also possessed a slight course downward behind so as to pass beneath the external occipital protuberance. A second semicircle was made which passed beneath the chin and joined the first one at an angle a little greater than a right angle, the second piece supported a cup at its center which when well padded received the chin. A strap with buckle was then attached to the edges upon either side and passed over the forehead by traction. I found I had complete control as the chin was carried upward and forward. Perfect adaptation and retention were secured and recovery was perfect. I find no description of such an apparatus, and submit this thinking it may perhaps prove of service.

RETARDED DENTITION.*

BY B. A. OWENS, M. D., PORTLAND, OREGON.

I assure you that it is with fear and trembling that I attack the subject—"Retarded Dentition"—assigned me by our worthy President. First, the question is not a medical question, but one of dentistry; and, as I have not even had the advantage of being a student of that honorable profession, it is not probable that I shall be able to edify this Association with any very advanced ideas. Second, the question is an ambiguous one, in that it leaves us in doubt as to its reference to the first or second dentition.

After examining my own library for something relative to the subject and failing, I betook myself to the office of one of the oldest and most learned of our profession and asked for enlightenment on this subject. You will judge of my feelings, when he replied, in that quiet, unassuming way which always brings with it confidence and conviction, "No, I have little or nothing on the subject. Really, I think there is very little in it; certainly not sufficient on which to write a good paper, and I should not attempt it. There can be no more reason why teeth should be retarded in their growth than why the body, as a whole or in part, should be retarded. Had the subject been irritable or difficult dentition, then you would have had material for a good paper."

I next called upon a number of our dental brethren, who kindly placed their libraries at my service. They informed me that there was little notice taken of "Retarded Dentition" by the works on dentistry, as it seemed of so little importance. All had met with cases of retarded dentition, both in the temporary and permanent teeth; but as this phenomenon had little or no effect upon the general health of the persons under observation, it attracted but little notice. After considerable meditation, I decided upon the plan of examining a series of dental journals, hoping in this way to be able to obtain the best views of a large number of practitioners. I therefore selected the

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*Read before the Oregon State Medical Society.

Dental Cosmos, edited by J. W. White, M. D., D. D. S., of Philadelphia, I have carefully examined files of these journals, reaching over a period of eight years. From this source, together with Garretson's large work on dentistry, I have gleaned some valuable information regarding *dentition*, but little, however, on the subject in hand. Offering this as a preface, I will begin by a brief explanation of the development of the primary teeth, as that subject is of too great magnitude to admit of more than a brief notice. I will add, however, that the formation of the temporary and permanent teeth is nearly or quite identical.

A tooth may be said to be an enlarged papilla of the mouth, which has undergone such histological and chemical changes that it has acquired a remarkable degree of hardness. We find three parts in a fully developed tooth: (1) The crown, the part which projects above the gum; (2) The neck, the part that is embraced by the gum; (3) The root, the part which reaches down into the alveolus of the jaw. In the centre of the tooth we find a canal, with an opening at the apex of the root, which terminates above in the crown. This central cavity is completely filled with a soft substance, known as the dental pulp, which consists of connective tissue, nucleated cells, blood-vessels and nerves. As above shown, the dental tissues are divided into three parts—dentine, enamel and cementum. The dentine constitutes the greater part of the tooth. It presents a yellowish-white fibrous appearance, and is one of the hardest constituents of the body. It has a firm matrix and extremely fine canaliculi, the so-called dental tubes. Cementum is absent from the crown of the tooth of man. It commences just over the enamel, at the neck of the tooth, and forms a thick covering over the roots. It is composed of a matrix identical with the bone and of lacunæ and canaliculi. They communicate with some of the dental tubes and with each other. The enamel, which is the hardest substance in the body, is formed on the outer surface of the dentine of the crown of the tooth. In the early days of fœtal life the jaws are planes of cartilage. These planes are covered with mucous membrane. The development of the teeth begins in this mucous membrane. The mucous membrane and the skin are continuous structures, and, anatomically speaking, are quite analagous. They are divided into two layers, the *dermis and epidermis* The external layer, or epidermis, is derived from the external germinal layer, or epiblast, while dermis originates from the *mesoblast*, or middle layer. These two layers are separated by a transparent homogeneous structure, which has received the name of basement membrane. The enamel organ and dental bulb originate on opposite sides of this membrane. The first rudiment of the tooth appears about the sixth or seventh week of fœtal life, when the mucous membrane is vascular, embryonic or gelatinous tissue.

The rudiment, or enamel germ, is a prolongation of the stratified epithelium of the surface, into the depth of the mucous membrane. This folding and prolongation of the mucous membrane has been called the budding of the prismatic layer of epithelium. It deepens and increases in size, and it soon becomes invaginated by a papillary mass of nucleated cells which arise in the mucosa, or dermal tissue. This papillary mass is the dental germ of the tooth. The enamel organ folds over it. The cavity of its under surface becomes more marked in conformity with the increasing concavity of the dental papilla. The surrounding dermal and subdermal connective tissue assume a laminated arrangement, which forms the tooth sac or cementum.

Previous to the year of 1838, the many theories that had been advanced upon the origin and development of the mammalian tooth were vague and general; but during that year Goodsir presented a concise and systematic statement upon the subject, which was then accepted, and has since been reproduced, without modification, in most of the works on anatomy and physiology. Subsequently further investigations were made by other scientists upon the teeth of reptiles, fishes and other lower animals, demonstrating those organs to be muco-desmal appendages, but still accepting Goodsir's theories' respecting the mammalian teeth. Since 1863, Professor Kolliker's investigations, showing that there was no marked difference between the origin and development of the teeth of mammals and those of the lower animals, have been elaborated and confirmed by the latest and most prominent scientists. So, to-day, we recognize the origin of human teeth, in common with those of other animals, to be from an inflection of the stratum malipegium or columnar epithelium, which forms the germ of the enamel organ.

But we are most interested in the essential constituents of healthy or normal development. This complex molecular mass, with its differentiated prospective results, must depend for its normal constructions upon its original constitution on one hand, and on the other upon the character of the energy supplied to it during development.

How to secure healthy and vigorous constitutions is the greatest problem of life. Poisons both by inheritance and acquisition are constant dangers. An inherited poison may not only be responsible for diseased fibre, but may be the cause of inflammatory conditions, which will exclude the normal nutrition by interfering with healthy digestion, healthy respiration or healthy excretion. The disturbance of any one of these may render the formative process, in part or in the whole body, faulty. Independent of these processes, pathologists believe there is something in the blood itself which is at least as essential to its healthy state as are these. The blood is indeed often occupied in correcting the evils to which they, more than itself, are subject, namely, the power of assimilation or maintenance which it possesses as independently as any tissue in the body. It is by this assimilative power of the body that the tissues are constantly guarded. Many noxious substances introduced into the blood are changed and rendered harmless before they reach the tissues; nor can any substance introduced from without produce disease in any organ, unless it be such an one as can escape the assimilative and excretory power of the blood itself. Now, the theory of specific disease is that each of them depends upon a definite and specific morbid condition of the blood; that the local process in which each is manifested is due to the disorder produced by the morbid blood in the nutrition of one or more organs, and that, generally, this disorder is attended with accumulation, and leads to the discharge or transformation of some morbid constituents of the blood in the disordered part. This brings us back to the development and durability of dental structure.

Many authors claim that children who have suffered from any of the eruptive fevers during the development of the secondary teeth, are destined to suffer from inferior enamel, early decay and loss of their permanent teeth. Dr. Henry Lee gives as his opinion that anything which will impair nutrition at a particular age, whether mercury, syphilis or scrofula, will produce analagous teeth. Poorly fed children, or those using sugar-teats, develop inferior teeth. Dr. Southey reports a very interesting case of sixteen children, all by the same father, but of two mothers; ten by the first wife and six by the second. Out of this large family none were known to have had eruptions in early infancy. The first teeth of all these children were good and sound; but of the teeth of the eighth child of the first wife and two of the second marriage developed teeth fully answering to the description of the teeth known as the Hutchinson syphilitic teeth. But the interesting feature was that all the children brought up by the wet-nurse, or who were nursed by the mother, had well-formed secondary teeth, while those brought up by the bottle had the so-called syphilitic looking teeth.

Dentition, though a physiological process, is yet, like that of utero-gestation, one of constant irritation. This, then, is a matter to be considered in all these associated lesions. Yet I would not be understood as attributing all infantile ailments to detention. Some authors estimate the mortality of children at this age to be one out of every ten. Professor Camper states that out of five thousand nine hundred and eighty-nine infants admitted into the foundlings' hospital, only eight hundred and eighty-four were found alive at the age of five years. Considering the great mortality among infants, it would be well for every physician to pay special attention to dental evolution, which is the physiology of the subject, as well as to the signs and symptoms which accompany it.

The diseases—if they can be so-called—directly associated with and depending upon abnormal dentition are localized stomatitis, irritative fever, diarrhœa, spasms and eruptions of the skin, especially of the scalp and face. In estimating the amount of constitutional disturbance which may result because of a want of accordance between the eruption of a tooth and the absorption of the tissues which impede it, we have but to imagine the sensitive pulp, made up of arteries, veins, and nerves, in a condition of irritation from augmented vascular and nervous action. The scientific Dr White says—and I see that he is supported by Garretson and others—"We see that the pain so intense and unremitting as to destroy the appetite for food, to cause wakefullness, irritation, thirst, fever, diarhœa, or constipation, congestion, convulsions and death, may be due to the irritation of dentition, *without* the existence of a single local indication. In other words, that the most serious complications of dentitions are not caused by the pressure of the advancing tooth upon the gum, but by the backward pressure of the resisting gum upon the sensitive pulp, giving rise to a true tooth-ache, comparable only to that exquisite torture which is experienced in after life from an exposed and irritated pulp."

I think that we may easily understand that such a condition may exist if we but remember that at the period of eruption the roots of the teeth are not completed. Instead of the conical termination and minute foramen which characterize a perfect tooth, the aperture is large and its edges thin and sharp. Also, we must bear in mind the association of the fifth pair of nerves, which supply the dental filaments, with the great sympathetic system, thus connecting the teeth with the entire economy. The pathological bearings of such deranged action may not be limited; and under such circumstances it is not difficult to comprehend the *inefficacy* of any or all hygienic or medicinal measures, but certainly easy to understand how the thorough lancing of the gums over the tooth, or teeth, thus implicated may, by removal of the pressure, give a relief so immediate and complete that there can be no room for doubt of the correctness of the diagnosis. Dr. White reports a case in proof of these views. A child of one year of age, with four superior and two inferior incissors in position, after three weeks of restlessness, wakefulness, loss of appetite, fever, paroxysms of pain, with rapid emaciation, all without the slightest local indications in the mouth, was cured by free crucial incisions over the molar teeth, the improvement being so evidently the result of the operation that the relation of *cause* and *effect* was plainly recognized by every member of the family. Such cases are not exceptional and should suggest a more careful ivestigation of the developmental process of detention in otherwise unexplainable diseases of infancy.

J. A. Webster, M. D., before the Massachusetts Medical Society, states that about three per cent. of the infantile mortality of Massachusetts is attributed *directly* to dentition, and that probably many deaths from other diseases are owing to it indirectly. Yet he says physicians in high standing are not wanting who deny that dentition exerts a special influence in the etiology of children's diseases.

It is claimed by high authority that teething is a concomitant cause of cholera infantum, as it is during dentition that it most frequently occurs; yet others are equally sanguine that cholera infantum is due to intestinal follicular development, which is taking place at this time, which renders the child peculiarly liable to that disease. In teething we have as one of the first symptoms the excitement of the salivary and buccal glands of the mouth, stimulated to a constant overflow of their secretions, which are more or less modified by more acid in their constituents, due to the fact that the alkaline qualities are wholly taken up in supplying the demand of the system in the development of the teeth. The truth of this seems evident, in that the alkaline treatment of diarrhœa of children seems to be by far the most effective, and should suggest the administration of aquam calcis in all cases of druling in children, thereby furnishing a supply demanded by the system, and this might, in many cases, wholly arrest an attack of diarrhœa.

After carefully tracing the embryonic tooth to its full and complete development, hoping to find some plausible or tangible cause for retarded detention, we must acknowledge that we have succeeded in failing; and we are tempted to resort to the Yankee method of solving the mystery, by asking why there is such a great difference in the complexion as well as in the physical and mental stature of members of the same family. Now, why should my osseous structure cease to elongate at the undesirable length of five and one-fourth feet, while a younger sister is rendered more graceful and symmetrical by an addition in her case of two or three inches, and a brother is rendered grand and imposing, in appearance, by the superior development of his osseous and muscular systems? Why should Tom Thumb fail to grow beyond two feet in height, while his brothers and sisters were all large and well-developed men and women? Why should the same parents give to the world a philosopher and an idiot, a giant and a dwarf, one child with low, degrading propensities, another with pure and lofty ideas? These are questions which have been studied and pondered over for centuries, and still remain unanswered. And, so far as I have been able to learn, the scientists in dentistry have failed to give any reasonable cause for retarded dentition, except in cases of too early removal of the primary teeth, which interferes with the proper development and eruption of the secondary teeth. I have also noticed several articles in which the authors claimed that rickets was a cause of retarded dentition, and have gone so far as to say that rhachitis may be looked for where the eruption of the teeth is delayed. Though this may be the rule, yet we know there are many exceptions to it. Most any practicing dentist can point to numerous cases, which have come under his own observation, of persons from twenty to forty years of age who have always enjoyed good health, yet are deficient in two, four or more teeth, which have either never been erupted or were erupted late in life. When the latter is the case, it is often due to the irritation produced by wearing a plate.

Since looking up this subject, I have made some observations myself. One of my patients, a lady of twenty-three years of age, has never erupted her first four inferior molars. I reported this case to a dentist, and he informed me that aside from the wisdom teeth, which often fail to erupt, the first inferior molars were the ones most frequently absent; why, he knew not, and thus far I have found nothing relative to it. A lady said to me: "I have two sons, twelve and fourteen years of age, both large, strong, healthy boys. The older has only four of his molars, and still retains several of his milk teeth, which are worn down almost to the gums. The younger boy has all his molars except the first pair below, which he has lost by decay, though he has but lately lost his milk teeth." I am informed by dentists, and also by reports of various writers on the subject, that those teeth which are erupted late in life, as a rule, are normal and in a perfectly healtny state, having at no time caused any trouble. A dentist of this city informed me that one of his infant daughters erupted her teeth very early while a second erupted hers late. The teeth of the second child are excellent, while those of the first child are very inferior. He said that his experience was that the teeth erupted early as a rule, are not so durable as those erupted later. These views are supported by many dental practitioners.

Professor Jacobi, in a clinical lecture on irregular and abnormal dentition, presents a large collection of such anomalies. The history of congenital teeth is old, reaching far back into ancient history. The celebrated Marcus Curius, consul of the Roman Republic, two hundred years before our era, had a full set of teeth at birth, which was the reason of his being named Dentatus. Zoroaster, the Persian legislator, also had teeth at birth. Professor Jacobi claims to have seen twenty cases of congenital teeth. He regards them as an accidental connective-tissue formation, and advises their immediate removal. He claims that it has been erroneously stated that in such cases the primary teeth do not appear. He gives a lengthy list of cases of retarded dentition. One girl erupted four temporary teeth at thirteen years of age; another at six years had only a few incissors; one lady had only two upper incissors. Several cases are cited where there were an entire absence of teeth; but in nowise does he attempt to account for this anomaly.

In conclusion I will briefly mention a case reported by Dr. L. F. Stoddard, of Hillsboro, Illinois. If true, I should judge it to be one of the most remarkable cases on record. He says: "Mary McKenn was born 1787, in Green county, Pennsylvania; emigrated to Indiana at thirty years of age; from thence went to Illinois at fifty-five years of age. At the age of seventy-three her eye-sight returned, since which time she has been able to read the finest print. At sixty all her teeth had been removed, but at seventy-nine she began cutting the *third* set, and at present she lacks only two molars on the right lower jaw of having a full set of teeth. At eighty-eight the catamenia returned, and have continued with regularity ever since." I must add, however, that Dr. Stoddard failed to inform us whether the bloom and blush of girlhood had also returned or not.

Since writing the above, one of my patients informs me that there is a similar case to the one just mentioned in Jacksonville, Oregon, which has been much commented upon by the Jacksonville papers, and many persons have traveled long distances to satisfy themselves of the truth of the reports. This lady, Mrs. Schrump, is past ninety years of age. and is cutting her third set of teeth. Her eyesight has so much improved that she can read fine print without the aid of glasses. In her case I am informed that these are the only indications of returning youth.

AN INTERESTING CASE OF FEMORAL ANEURISM CURED BY DIGITAL COMPRESSION.

REPORTED BY A. D. HARD, M. D., PHILADELPHIA, PENNSYLVANIA.

Captain W., of the United States Army, about thirty-eight years of age, was admitted into the Jefferson College Hospital October 12, with a well marked aneurismal tumor of the femoral region, extending from the inguinal furrow to within four inches of the knee. The patient was a man of full habit, sandy complexion and well nourished. He gave a history of a severe wrench of the thigh, three years previous, while marching, which was attended by a sharp stitchy pain in the right groin and followed by a throbbing lump about the size of a chestnut, which has been steadily increasing in size up to the present time. The circumference of the thigh and tumor was twenty-eight and one-half inches, circumference of left thigh, nineteen inches, giving an approximate circumference for the tumor of sixteen inches. The pulsation was strong, a characteristic thrill was imparted to the hand, and the bruit was very distinctly heard. After careful examination Professor Pancoast determined to attempt a cure by means of digital compression of the femoral artery as it emerges from under Poupart's ligament. Eighteen members of the graduating class were selected and compression was maintained, sufficiently to stop the pulsation, for a period of sixty hours continuously, the location of pressure becoming by this time somewhat inflamed and very tender; digital compression was now abandoned and a padded tournaquet was applied and kept on for about thirty-six hours, making almost one hundred hours occlusion of the circulation through the femoral artery. During this time the tumor had decreased in size, about one-third, pulsation had completely ceased and the solidity of it resembled a fibroma. Throughout the course of treatment, the limb was enveloped in cotton-wool and a rubber bandage, sufficiently tight to compress the superficial circulation, was kept on from the toes up. Subcutaneous injections of ergotine, three grains to an ounce, were given every three hours for the purpose of delaying the formation of complete collateral circulation and so favoring clot formation in the aneurismal sac, notwithstanding this, compression below the tumor was necessary during the last twenty-four hours. Morphine was given *pro re nata* and the food was free. The patient's courage and endurance was a marked feature in the case and added not a little to the success achieved, which from the stand-point of size and location of tumor is without a parallel in the annals of surgery.

EDITORIAL BRIEFS.

A Learned Editor.—The *Weekly Medical Review* is "published simutaneously in Chicago and Saint Louis, every Saturday." So the title page reads and we have no reason to disbelieve it. It has a long list of editors and in a late number one of these learned men informed the world that a medical department had been started in connection with the University of Michigan, that said university is a sectarian school, an outgrowth of the Seminary of our Lady of the Holy Angels, etc. He locates the University of Michigan in Buffalo. Truly the geographical and general knowledge displayed by this learned editor is an honor to the profession.

Professional Courtesy.—A few weeks ago Professor Maclean, of Michigan University, removed his family and office to Detroit. In the very next number of the *Detroit Lancet*, there occurred the following:

"In the *Obstetric Gazette*, Dr. R. S. Sutton, of Pittsburg, Pennsylvania, corrects certain statements made by Dr. Herrick, of Grand Rapids, respecting European gynæcologists. In concluding he offers to answer all questions Dr. Herrick may ask him, if he is able. He says 'I was long abroad and had access to every thing and I *do not* speak as did a certain Michigan professor of surgery, when he began his report of a number of ovariotomies, by saying, "Since my visit to Dr. Keith." When I began to read his report, I supposed that he had seen Dr. Keith operate, but when I asked my friend, Dr. Keith how long he had visited him, he replied, "he did not see me operate but spent an hour or two talking in the room here with me." Now, I want to ask Dr. Herrick if it might not be as good for science to correct these shams in Michigan professors, as to find so much fault with foreign surgeons, especially kind to Americans.'"

As Dr. Maclean is the only professor of surgery in Michigan who has ever published a list of ovariotomies, he must be the one referred to in the quotation. Who this Dr. Sutton is, who has had access to everything abroad, we are sure we do not know. However, we know one thing about him and that is that he has not told the truth. This is plain English. In the first place, the expression "Since my visit to Dr. Keith" does not occur in Dr. Maclean's paper, and in the second place, Dr. Maclean did see Dr. Keith operate both in his private practice and in the Royal Infirmary. So much for the statement of Dr. Sutton; but we are more especially curious to know why Dr. Connor took such pains to pick up this vile slander. He made no inquiry of Dr. Maclean as to the truth or falsity of Sutton's charges although his office is not more than a block from Dr. Maclean's and there is telephonic connection. Dr. Maclean had just located in Dr. Connor's neighborhood and Dr. C. greets his rival by the publication of a vile slander. This is professional courtesy as practiced by Dr. Connor. This is Christian Charity! This is the way in which a bright and shining light in the Church carries out the golden rule. This is the conduct that brings honor to the profession. If a man of Dr. Connor's standing thus greets a new rival for practice in his neighborhood, what are we to expect from the ordinary physician?

THE PRODUCTS OF PUTREFACTION AND THEIR ACTION ON THE SYSTEM.—In medicine this is an age of bacteria. Almost every untoward result happening in surgery and in many internal diseases is attributed to the action of germs or organisms of some kind. There has been almost a total neglect of a study of the chemical products arising from putrefaction and their harmful effects when absorbed. Undoubtedly this attempt to explain every disaster as due to germs has been carried to an excess. Hiller has recently written a volume in which a study of the products of putrefaction has been made. The substances formed during the putrefaction of animal tissue may be divided into the following groups: (1) Peptones and other albualbuminous substances; (2) nitrogenous bases; (3) the so-called ammines; (4) organic acids; (5) the inorganic end-products.

Under group first we have: (*a*) peptone, possessing all the chemical properties of the peptone formed during gastric digestion; (*b*) globulin, the same as that found in muscle; (*c*) Panum's putrid poison, and (*d*) Hiller's septic ferment.

So small a quantity as twelve milligrammes of Panum's putrid poison, injected in the jugular vein of a large dog, causes characteristic symptoms and leads to a fatal termination. This substance is prepared by filtering the putrid fluid, boiling for several hours, precipitating with absolute alcohol, evaporating the filtrate to dryness and extracting the residue with water. Of course, there can be no germs in the substance prepared by this method. It is not known whether Panum's putrid poison is a single chemical substance like morphine, or a complex poison like opium. It has been prepared from both putrid blood and pus.

Hiller's septic ferment is obtained by adding glycerine to the putrid fluid, and filtering first through linen and then through unglazed earthen cups by means of the air-pump. The micro-organisms would not filter through the cup. If small quantities of this substance be injected under the skin or into the blood, the animal remains apparently well for four or five days and then presents all the symptoms of septicæmia, which terminate in death. A small quantity of the blood of the animal so poisoned, furnishes enough of the substance to produce a fatal termination in a second animal. A still smaller quantity from this second animal has the same effect on the third, etc. In the tenth generation, Hiller found that only one-two hundredth of a drop of the blood was required to produce fatal results.

In group second, there are leucin, tryosin and similar harmless crystallizable substances, Bergmann's sepsin, septic alkaloids and a narcotic material.

The sepsin is prepared by Bergmann and Schmiedeberg from putrefying brewer's yeast. It is not a constant product of putrefaction. It acts in small quantity, one centigram of the sulphate being sufficient to kill a large dog, and the symptoms produced are similar to those of cholera. The sulphate forms in needle-shaped crystals, which burn without leaving a residue.

One of the septic alkaloids seems to act very much like atropia in its chemical and physiological tests.

The narcotic body produces in dogs a deep, unbroken sleep of many hours duration, from which the animal awakens without having suffered any apparent injury.

The members of the remaining groups are not especially poisonous.

It is evident from the methods by which these substances are prepared that their effects cannot be due to bacteria or other micro-organisms. We have a farther illustration of their action in the cases of poisoning from eating partially decomposed sausage, cheese and fish. In some countries cases of this kind are by no means rare. The inhabitants along the Volga in Russia, bury their supply of fish in wooden casks and take them up for food as needed. Not infrequently the flesh is partially decomposed, and fatal results are brought on by partaking of it. These poisonous substances are formed during the early stages of putrefaction. The old, ripe cheese, however vile its odor may be, does not produce the poisonous effects.

Whether the injurious effects resulting from the absorption or the injection of putrid matter are due to the bacteria or not is a question of importance. The answer has been attempted by a number of experimenters. It has been found that filtration and diffusion do not remove the poisonous properties of of purtrid fluids. This is true, as we have seen even when the fluid is filtered through a porous cup. Boiling for hours does not destroy the poison. The fluid may be evaporated to dryness and the residue heated for hours at 130° centigrade as shown by Raison, and still the substance produces its characteristic effects. Again the addition of various antiseptics has failed to destroy the poison.

On the other hand, the bacteria found in putrid fluids have been separated from the fluid by transplantation to Pasteur's solution and subsequently injected under the skin of the lower animals and of man without producing any farther effects than local irritation.

From these facts, it seems probable that the chemical products of putrefaction play an important part in the production if septicæmia There is here a wide and promising field for investigation. We recommend Hiller's work to those interested on the subject.

CORRESPONDENCE.

MICHIGAN STATE BOARD OF HEALTH.

Reported for THE PHYSICIAN AND SURGEON.

The regular meeting of the State Board of Health was held October 9, 1883, at its office in the Capitol at Lansing, the following members being present: Arthur Hazlewood, M. D., of Grand Rapids; C. V. Tyler, M. D., of Bay City; J. H. Kellogg, M. D., of Battle Creek; and Henry D. Baker, M. D., Secretary.

The Secretary presented his annual report of property showing valuable accessions to the Library of the Board by gifts and exchanges; also his quarterly report of work done in the office. the regular correspondence alone, exclusive of many postal card communications not copied, making five hundred and seventy-two pages of the letter book record.

From week to week, as magazines and other accessions to the library are received, considerable work is necessary to make references by which at any time papers on a given subject may be found; also to look up papers on various subjects, and to pack and ship books, etc., to those who undertake to write papers for sanitary conventions, or other uses. During the past quarter, three such requests for books and papers have been filled.

A letter from Dr. Whelan, on behalf of the common council of Hillsdale, invited this Board to hold a sanitary convention in that city. The invitation was accepted, the convention to be held at such time as shall be agreed upon hereafter. A letter was read from Reverend J. Pierson, D. D., of Ionia, relative to holding a sanitary convention in that city. It was decided to hold one in Ionia, if practicable, early in December.

A communication from Honorable C. A. Gower, requesting this Board to examine plans for a proposed new building at the State reform school was received and acted upon.

A communication was read from Dr. Isler, of the Upper Peninsula, requesting that the documents issued by this Board on the prevention of contagious diseases be translated and published in the Scandinavian and Finnish languages for the use of miners and others who do not read English, and among whom both scarlet fever and diphtheria are now present. The *Leaflet* on communicable diseases (Number XLVII) was ordered to be translated and published in the Scandinavian, French and Polish languages.

Announcement of the meeting of the American Public Health Association was made, and it was voted to hold a meeting of the Board in Detroit, November 13, to attend the meeting of the association, and to transact such business as may come before the Board.

A communication from the chairman of the Ontario Provincial Board of Health gave notice of a sanitary convention at London, Ontario, November 16 and 17. Drs. Baker and Hazlewood were appointed to attend this convention.

The secretary was directed to procure from the county clerks for the uses of the Board, a list of the physicians in the several counties, and their post-office addresses if practicable.

A memorial was read from citizens of Morley, Mecosta county, relative to the throwing of sawdust and other refuse into a stream, a subject not controlled by the State Board, but by the courts. The memorialists had been so informed by the secretary.

The secretary presented a resumé of the work of other boards of health:

The Boston, Massachusetts, Board of Health has lately placed measles on its list of diseases to be reported to the board by householders and physicans. That board has publicly offered to superintend the process of disinfection, if requested to do so by the householder. Dr. Kellogg thought it desirable that boards of health superintend disinfection after contagious diseases where possible. He thought disinfection by sulphur would be more efficacious, if carried on in a moist atmosphere

Drs. Hazlewood and Baker were appointed a committee to examine and report on text-books on hygiene with especial reference to alcohol, if any such books are sent to the Board for examination.

Dr. Kellogg for himself and Dr. Avery, special committee on the present knowledge respecting diphtheria, reported a paper embodying a large number of replies to a circular of inquiry, some being very valuable. The report was accepted with thanks, and ordered printed in the annual report.

The next meeting of the board will probably be for the examination of plans for buildings at the State Reform School.

HENRY D. BAKER, Secretary.

AN OLD VOLUME.

WESTFIELD, NEW YORK, July 24, 1883.

MR. EDITOR: By bequest of James Buss, a fine old Englishman of the antique style, there came into my hands a volume of so rare and ancient a nature that I am constrained to let you peep over its pages with me.

The book is bound in cow's skin and treats of the "Cures of diseases in horses." The author claims entire originality in his methods and declares his own the "first work of the kind ever made publick."

It was printed by Ralph Holt for Thomas Passinger, at the Three Bibles on London Bridge, and M. Wolten at the Three Daggers on Fleet street, near the inner Temple gate and at the Ring on Ludgate Hill against the Old Baily in 1688.

The "post script" calls the attention of the "courteous reader" to the fact that the author "has with infinite labour and industry perfected and finished this, his master peice, for the cure of horses and mares, wherein the physical part of horsemanship concerning those manifold inward diseases incident to horses is clearly discovered and the chirurgical part concerning outward accidents is plainly opened and described."

The author likens his book to a map, and says, "so likewise as you may behold every small port, river, creek and stream running up and down in the superficies of the earth; so I have made known and drawn divers pictures setting forth all the parts and parcels of a horse's body, and have most lively delineated every part and vein where to find it from head to foot."

In closing his post script he abjures "gentlemen and others" to study the horse, "to employ only learned farriers and carefully to avoid those illiterate farriers who are not book-learned, and, therefore, have no more knowledge than the beasts themselves, and run thereby into gross errors from ignorance of the theorick and practick part of any art or science."

For the further benefit of the reader "all simples and compounds good for horses are here set down and their conditions whether hot or cold are here described; also what ounces, drams and scruples to be given in any drink." Gentlemen and others are to consult the farriers to "confirm their judgments," in the weights and measures.

There are two appendices devoted to "diseases of cattle, sheep, goats and dogs," and to the "correct method of training up race horses" respectively.

The main body of the book is divided into two parts, the first of "cures physical" and the second of "cures chyrurgical." The first chapter treats of the "composition of a horse" and a brief quotation must suffice to give you a glimpse of the status of equine anatomy at that period. "Wherefore schoolmen have made amongst the instrumental members four sovereigns or princes above the rest; that is the brain, the heart, the liver, and the stones. From the brain springeth sinews whose office is feeling; from the heart cometh arteries whose office is sprightliness and livelyhood; from the liver veins whose office is warmth and strength; and from the stones cometh generation and increase to succeeding ages." I am here advised by the author to turn to Chapter II of Part II, where the anatomy of a horse is fully described.

Here are described the "veins and how many there be," and surely here *do* appear nearly all the veins known to modern surgery, but with quaint names drawn from location and function. There are just thirty-seven veins which the author calls "chyrurgical veins or veins to let him blood withal."

"From the brain there is derived one great sinew or tendon which passing down through the hollowness of the neck and back-bone doth extend itself even to the nethermost joynt of the horse's strunt." From this main sinew is derived two small ones which passing through small holes in the skull pass down along the cheeks. Two more arising simillarly pass to the nether lip. "Then hath he twenty-eight small threads which passing through small holes in the neck bones knit them fast together: so likewise to knit all his chine even to the neather end of his strunt the number whereof is infinite and uncertain."

Lest I tire you I must be allowed to summarize: "There are thirty-eight sinews; there are one hundred and seventy-seven bones and no more, that is two in the head, etc."

The descriptive anatomy is thus exhausted by a sketch of the three divisions—the veins, the sinew, and the bones.

The functions of the great involuntary muscular system are not mentioned.

The processes of digestion and the alimentary tract receive one mention as "the part called guts." The nervous system as we now understand it is not mentioned. In the chapter on humours, the blood is classed as "waterish humor of gross degree," and is spoken of in the same connection with "melancholy, phlegm, choler and moulton grease." The word muscle does not occur. The breath is mentioned but the function of respiration passes without notice.

Elements are discussed in Chapter II Part I, and the properties of air, fire, water and the earth pretty fully explained.

Chapter VII treats of powers "namely three—power natural, power animal, and power vital."

The chapter on actions which are derived from the powers sets forth that "the virtue imaginative resides in the forehead, the virtue discoursative" in the apex, and the "virtue memorative in the hinder-part of the head." These with the virtue motive and the virtue sensitive emanate from the power animal. The vital power loosens and restrains the heart. The natural power presides over the functions of organic life.

Chapter VIII, "of spirts and in what parts they remain," is full of interest. The vital spirit resides in the brain where "the cord of the brain doth hourly water and nourish it." The animal spirit dwells in the heart from whence it flows along the little conduit pipes to every part of the body. The natural spirit has for its nidus the liver "from whence it moveth in the veins being the chief source of strength and heat." This chapter enjoins every good farrier "to have some comfortable simple which may maintain and keep the spirits in their full strength."

Chapter XLII. "How to Staunch Blood. If your horse from accident or by the carelessness of an ignorant farrier who letteth him blood when the sign is in that place, bleedeth too exceedingly you shall lay unto the wound a little new horse-dung tampered with chalk and strong vinegar, or burnt silk, burnt felt or burnt cloth. Or else pour into the wound the juice of coriander or else let the horse chew the leaves of perwinkle, some lay to the wound bruised nettles, bruised tansey or bruised sage—or the dust about the smith's forge or a clod of earth or two ounces of the boiled blood of the horse dried and stuffed in the wound." If these all fail the soft down of hare's skin or of coney's skin is the last resort."

The moon's phases are to govern the whole business of breeding, and a full moon produces horse colts and *vice versa*. The test for pregnancy about Christmas time is to pour cold water in the mare's ear, "if she shake the ear and head only she is not with foal but if she shake the whole body" no doubt can longer exist.

The obstetrical department of this book is truly a curiosity shop and I regret my utter inability to properly present it here.

Apropos of the recent introduction of oats (avena sativa) as a remedy I quote from Chapter CVIII:

"Take of milk two gallons and warming it on the fire put thereto four ounces of burnt alum which will make it run to curds. Cast the curd away—strain the whey—add two quarts of clean husked oats (green) set them on the fire till the oats swell up and burst. Place them in a cullender and let them drain pretty dry after which place them in a frying pan till they smoke a little when you suddenly press them and collect the oil (oyl). The dose of this oyl is two or three spoonfuls in sweet wine. It is alterative, and purgative in large doses. "This oyl of oats is of all medicines whether simples or compounds the most excellent and sovereign." The author's method is said to be the simplest" but there are other more artificial and curious ways to extract the oyl."

This book is ably edited and is absolutely free from vain boasting or quackery. The author's pharmacy list contains nothing quackish or irrational and evidently the work represents the best veterinary science of the Seventeenth Century.

The book compares favorably with any work of its kind I have noticed and judged by his works, Phillip Passinger would be deemed to-day respectable and regular.

More anon from, yours, etc., J. A. BEEBE, M. D.

TRANSLATIONS.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.

BY RALPH D'ARY M. D., ROMEO, MICHIGAN.

LUNG SURGERY.

The surgery of the lungs is the latest result of antisepsis, and promises to have a great future. It is interesting to trace its origin and progress. We will state at once that by the expression "lung surgery" we here understand operations on the lungs themselves, exclusive of operations on the thoracic walls, pleuræ or mediastinum.

Lung surgery dates back to 1873. In that year Mosler published a case of treatment of a pulmonary cavera by opening and application of all the accepted surgical principles. In the same year Wilhelm Koch, of Dorpat, Russia, made his first experiments in acupuncture of the lungs with injection of iodine solutions. These two pioneers were soon followed by others in similar experiments. We will first glance at the experimental, then at the clinical side of the question, in their chronological order.

W. Koch made the following experiments on dogs. Pressing the finger deeply into the intercostal space, he thrust in a thin needle, penetrating deeply into the parenchyma of the lung, and then withdrawing it. Numerous experiments proved that such puncture of the lung, even when repeated at one sitting, is easily borne by the animal, and that there is hardly any reaction; the temperature does not rise, the breathing is not accelerated, the appetite is not impaired, and the dogs remain apparently quite well. If after some time the animal is killed, the punctured parts of the lung are found to have been converted into a fine, distensible connective tissue, without any symptoms of abscess. Acupuncture is not suitable for the conversion of a more extended part of lung parenchyma into connective tissue, for the punctures act only on a very limited space, and they would have to be continued for months. But W. Koch has demonstrated that the latter object can be obtained quickly, easily, and without danger, by injecting into the parenchyma of the lung a solution of one part iodine and one part iodide of potassium in ninety or one hundred and twenty parts distilled water, or by using the galvano-cautery. If the above solution is injected carefully, drop by drop, and at intervals, taking care not to wound the heart, the large blood-vessels and nerves, any part of the parenchyma of the lungs may be converted into connective tissue without any reaction. Pain is felt only when some nerve of the thoracic wall is wounded, the lung itself being insensible to the puncture; and cough appears only when a large bronchus is punctured and filled with the fluid. The injections are performed by means of a hypodermic syringe with a needle of corresponding length.

Thus the very first experiments of Koch have settled two most important facts:

(1) The lung is insensible (indolent) to wounds, and the latter are followed neither by local nor general reaction. This circumstance explains the cases of healing by first intention of gunshot wounds of the human lung, or the separation of pieces of gangrenous lung, either spontaneously or after ligature, in cases of prolapsus (hernia) of the lung.

(2) That by means of injections or galvano-cautery a considerable part of the lung may be destroyed without injury to the animal.

Both these facts open up possibilities for pulmonary therapy. The first demonstrates in general the possibility of surgical operations on the lungs, and in particular, the feasibility of aspiration of the lungs, either for diagnostic or therapeutic purposes, as for instance the locating of purulent or gangrenous foci, or the removal of their contents. The second of the above facts permits the hope that injections of irritating or antiseptic fluids, or the galvano-cautery, may serve as reliable means for the disinfection—antiseptics—of the lungs, and for the destruction of morbid or infectious foci. We shall see, further on, that the clinic already begins to realize these hopes.

After the publication of Koch's experiments eight years passed, after which there appeared three more papers on lung surgery, by Gluck, Schmid, and Block.

Gluck experimented on the effect of extirpation in animals of the whole of one lung. He began by observing the effect of a ligature *en masse* of one lung at the root (hilus). He strictly applied all antiseptic precautions and sewed up the thoracic wounds. The latter generally healed by the first intention. Only in two cases death took place, apparently from paralysis of the heart, immediately after the operation. The autopsy in these cases showed that the ligature had been applied too near the heart, including even a part of the heart and the phrenic nerve. All the other animals survived. One of them, a rabbit, was kept a whole year, and was in excellent health.

When the animals were killed and examined, the non-ligatured lung showed no signs of inflammatory action, œdema, or hyperemia; the walls of the ligatured vessels adhered per primam. In no case were thrombi found in the walls of the heart.

After these experiments followed those of extirpation of the lungs, which were made in the following manner: Chloroform—crescentric cut, with the convexity towards the sternum, through the skin and pectoral muscles, from the third to the sixth ribs—subperiosteal resection of the third, fourth and fifth ribs—exposure of pleura and opening of same between two forceps, parallel with the sternum (the lung collapsing and the breathing being slightly accelerated)—ligature *en masse* of the root of the lung, or successive extirpation of each lobe with previous application of ligatures—careful cleansing of the pleural cavity—close compression of the thoracic cavity by application of deep suture, in order as much as possible to lessen its size, and finally antiseptic treatment. When the thoracic cavity is lessened by the above means, the apnœa disappears, as well as the cyanosis of the mucous membranes, which sets in on the extirpation of the lung. Of these operations Gluck has performed twenty in dogs and rabbits. There never was any secondary hemorrhage. Several of the rabbits died on the seventh to the tenth day after the operation, from pericarditis and pleuritis. The others bore the operation very well; the wounds healed rapidly—in one case in ten days—without any reaction, and in none of them was there any subsequent apnœa or other morbid symptom. On the ground of these experiments Gluck formed the following conclusions:

(1) Ligature of the root of one lung and extirpation of one lung are well borne by animals.

(2) Careful antisceptic after treatment leads to complete and permanent recovery after extirpation of one lung.

(3) The ligated vessels of the lung heal by the first intention. No thrombosis is formed in the walls of the heart.

(4) The ligated root of the lung often does not undergo aseptic gangrene, but takes an active part in the formation of a solid cicatrix at the place of ligature.

(5) In no case was there any subsequent hemorrhage from displacement of the ligature.

(6) Under unfavorable circumstances death may set in from pericarditis or pleuritis of the non-operated lung, but even in those cases G. had found no thrombosis in the walls of the heart.

Clinical observation of consumptives has shown that conservation of life is possible while even a very small part of the lungs continues its functions. It is true that in these cases the lessening of the breathing surface takes place very gradually and the patient has time to accommodate himself to the change. but on the other hand Gluck's experiments show that the organism (of course so far only of animals) bears well the sudden removal of the whole one-half of the breathing surface.

The experiments of Schmid and Block, present still more interest, for they consisted in the *partial* resection of the lung. which is an operation more or less applicable to the human body, and therefore, having clinical importance, Schmid performed his partial resections in the following manner: Having been shaved and washed on the corresponding side of the thorax, the dog was anæsthetized by the subcutaneous injection of morphia and inhalation of ether Then a piece of the fourth or fifth rib was resected, the pleura costalis was cut through quite extensively and a piece of the now collapsed lung was drawn out either by the fingers or forceps. Then a sort of ligature *en masse* was applied, or acupressure was used, by transfixing the lung with the needle and then applying the pressure by means of catgut, below the place intended to be resected, in order to prevent bleeding from the part operated upon. Having thus rendered the part bloodless, a wedge-shaped little piece of lung was cut out, the large vessels and bronchi were ligated, one by one, the edges of the pulmonary wound were closely united with a catgut ligature, and then the lung was dropped back into the pleural cavity, the external wound was closed by means of deep sutures and was treated with all possible antiseptic precautions. There never was any bleeding.

[The author omits to state that the temporary ligature *en masse* is removed before the lung is dropped back, which of course is a self-evident necessity.—TRANSLATOR.]

This operation was performed on eight dogs, of which three bore the operation well, and five died—one from carbolic acid poisoning, the others from purulent pleuritis, that is, from insufficient antiseptic after-treatment, which is so difficult in animals. Generally there were no marks from the ligature of the lung, nor gangrene of the ligatured part, nor inflammatory reaction of any consequence about the wound. Only in two cases a very limited reactive pneumonia was found. The lungs contained air in every part; there was no pneumothorax and the heart was normal. In some cases there was noticed a diffuse subcutaneous emphysema. In one dog Schmid performed partial resection of the lung twice, at an interval of six weeks, and the animal bore them well both times. Each time one-third of one lobe was removed.

Schmid next tried to make partial resection of the lungs on the human cadaver. He resected sub-periosteally the third or fourth rib for ten centimetres, beginning at the sternum, and then he cut through the costal pleura. When the lung had grown fast to the costal pleura it did not collapse, of course, and then it was necessary carefully to tear away the adhesions with the hand. The greatest care had to be used when there were large superficial caverns in the apex of the lung, in order not to break their walls. Having separated the adhesions, a part of the lung was drawn out, then a temporary ligature *en masse* was applied, a piece was resected and the procedure in general was the same as on animals. Subsequent examination always showed that the lung was no where wounded accidentally, and had been separated without tearing.

On the ground of the above experiments Schmid came to the following conclusions:

(1) Surgical operations on the lungs in general are practicable and the technical difficulties not insuperable.

(2) Bleeding may be completely prevented.

(3) In patients with *sound* lungs, the conditions of operation are the same as in animals. [S. probably refers to the *technical* conditions only.]

(4) The technical difficulties existing when the lungs have grown fast to the costal pleura, are not inseperable.

In Schmid's opinion a partial resection of the lungs may be found useful in abscesses and tumors in the lungs, and in neoplastic formations growing from the ribs in an inward direction. Further, in case of an isolated pulmonary cavern, when the remainder of the lungs is not yet infected with tubercle. It frequently happens, says Schmid, that after a pneumonia or prolonged bronchial catarrh (occasionally in patients with hereditary predisposition to consumption) there sets in an infiltration of the lung apex which does not progress to resolution. The patient's debility gradually increases, and there is reason to suppose that a cavern is forming, from which infectious tuberculous material may be carried into other parts of the body. Perhaps in such cases it may be possible to check the disease and cure the patient by cutting out from the lung the primary nucleus. Joints have of late been frequently opened or resected, in order the quicker to remove from the organism tubercular degenerations, and with excellent results, especially in young subjects—then why not expect similar success in resections of the lungs?"

Block, of Danzig, has also made experiments on dogs and rabbits of partial resection of the lungs, adding several interesting particulars to the above experiments of Schmid. At first all his subjects died, but gradually he elaborated a comparatively very safe and convenient method of operating. The lung is laid bare by means of a horizontal incision in the intercostal space, and is drawn out through the wound, a lobe is ligated, and cut off. It depends upon which lobe of the lung it is intended to operate upon, where the thoracic incision is made – anteriorly, laterally or posteriorly. The duration of the whole operation, after some practice, is not more than ten minutes. There is no secondary hemorrhage from the collapsed and ligated lung.

Of two dogs operated upon in this manner, one barked again on the second, the other on the seventh day. On the tenth day both dogs jumped and ate like healthy animals. In one had been removed the whole of the lower (large) lobe; in the other the middle lobe of the left lung. The resected pieces of lung and the dogs themselves were exhibited to the Danzig Medical and Philosophical Association. Dr. Scheele, former assistant of Professor Leyden, examined the lungs of both dogs and found nothing abnormal—not only was there no sign of pneumo-thorax, pleuritic exudates, or ectopia of thoracic or abdominal organs; but over the whole thorax were audible the normal breathing and percussion sounds.

Three weeks later the dogs were killed. In the dog from which the middle lobe of the left lung was removed, no outward defect of the lung was visible to the eye. The upper and lower lobe were found normal and had grown faster to each other and to the pericardium about the place which approximately corresponded to the middle lobe. The catgut ligatures had all been absorbed. In the second dog—the one from which the lower lobe had been removed, and which had begun to bark again on the second day after the operation, the anatomical changes were almost identical.

Block believes that a particular resection of the lungs might be useful in cuts, stabs and gunshot wounds of the lungs with severe hemorrhage from the pulmonary vessels; in tumors, prolapsus, gangrene and abscess in the lungs, and for the purpose of removing the infected apex. It is worthy of notice that the interesting fact of compensatory enlargement of the lung after removal of a part of it is confirmed also for man by the case of Ratjen (*Virchow Archives*, Volume XXXVIII): A man aged forty-nine, was suffering from paralytic symptoms, indicating an apoplectic focus in the brain. An examination of the thorax revealed nothing abnormal. (The examination, however, had been made without especial care, as there was nothing in the case directing the physician's attention especially to the chest.) The patient died. The autopsy showed cerebral apoplexy and abscess, and besides that an unexpected anomaly of the lungs. The left bronchus, at the distance of about one inch from the bifurcation, ended in a complete cul-de-sac; the left lung was shrivelled up to a very small volume, completely atelectatic, but without any symptoms of inflammatory or other morbid processes. In a word, it was in the fœtal condition, that is, it had never breathed. Therefore, the anomaly was probably congenital.

The enlarged right lung and the mediastinum, encroached far upon the left half of the thorax, occupying the place left free by the left lung.

This enlargement of the right lung explains the absence of very noticeable auscultation and percussion changes. The external surface of the pericardium had grown fast to the costal pleura, beginning at the third rib.

We will now examine the clinical aspects of lung surgery, The first case, published by Mosler, in 1873, was unfortuately quite unsuccessful. Mosler had opened and treated by drainage a pulmonary cavern, but did not in the least succeed in arresting the destructive process in the lung. Notwithstanding this failure, the surgical treatment of the lungs was soon afterwards applied in six more cases as follows:

(1)Large abscess in lower lobe of right lung. Incision in mammary region, washing out of abscess cavity, immediate subjective improvement; pleurititis of right side and death, (patient forty-four years old) twenty-nine hours after operation.

(2) Large abscess in lower lobe of left lung; fœtid sputa, insufficient expectoration of them; incision in sixth intercostal space; drainage, washing out; considerable improvement, continuing twenty-six days; sudden death on thirty-first day after operation (patient's age thirty-four years). No cause of death given.

(3) Multiple septic abscesses in lower lobe of right lung, hectic diarrhœa; insufficient expectoration; incision in eighth intercostal space; washing, drainage; on the third day cessation of cough and of fœtid sputa; in consequence of insufficient drainage the sputa again became fœtid, pleuro-pneumonia set in in the other lung; death; patient's age, forty-nine years.

(4) Unsuccessful attempt at puncture of broncho-ectatic cavern. At second attempt extraction of a small quantity of pus, in the operator's (Williams') opinion formed in consequence of first attempt.

(5) Gangrenous cavern in middle lobe of right lung; insufficient expectoration of sputa; collapse; incision at angle of scapula, washing out, drainage; improvement in the course of

one week, then again fœtid sputa, collapse and finally death (age sixty years) on twelfth day after operation.

(6) Fully successful extraction of echinococcus-cyst from lung; recovery.

Somewhat later Fenger and Hollister reported yet another case of gangrene in middle lobe of lung, where cavity was opened, drained, and the patient fully recovered.

[TO BE CONTINUED].

BOOK REVIEWS.

A DICTIONARY OF MEDICINE, INCLUDING GENERAL PATHOLOGY, GENERAL THERAPEUTICS, AND THE DISEASES PECULIAR TO WOMEN AND CHILDREN. By various writers, Edited by Richard Quain, M. D., F. R. S., Fellow and late Senior Censor of the Royal College of Physicians, etc., etc. Sixth edition, cloth; pages, 1816. New York: D. Appleton & Co, 1884.

This is one of the most valuable books presented to the profession within the last decade. The writers are all men of eminence and of recognized authority. Some of the subjects are treated in a masterly and scholarly way. We may mention the one on "Yellow Fever," by Professor Jones, of New Orleans, the one on "Cancer," by R. J. Goodle, on "Diet" by Dr. Pavy. The work is truly an encyclopœdia of medicine, and although the majority of the articles are condensed into as small a space as possible, they contain the essential points. The work will be well nigh indispensible to every physician.

TABULATED RECORD OF OBSTETRIC CASES. By J. A. Octerlony, M. D., Professor of Obstetrics and Disease of Women and Children in the University of Louisville. John P. Morton & Co., Louisville, Kentucky.

This is an excellent record book for obstetric cases, and all admit the great value derived from keeping such a record. These blanks make such a work an easy one to perform, and we most heartily recommend them to all.

SELECTED ABSTRACTS.

ACTION OF SALINE CATHARTICS.

Mr. Matthew Hay, of Edinburgh, at the close of a long and exhaustive article on this subject, draws the following conclusions:

(1) A saline purgative always excites more or less secretion from the alimentary canal, depending on the amount of the salt

and the strength of its solution, and varying with the nature of the salt.

(2) The excito-secretory action of the salt is probably due to the bitterness as well as to the irritant and specific properties of the salt, and not to osmosis.

(3) The low diffusibility of the salt impedes the absorption of the secreted fluid.

(4) Between stimulated secretion on the one hand, and impeded absorption on the other, there is an accumulation of fluid in the canal.

(5) The accumulated fluid, partly from ordinary dynamical laws, partly from a gentle stimulation of the peristalic movements excited by distention, reaches the rectum and produces purgation.

(6) Purgation will not ensue if water be withheld from the diet for one or two days previous to the administration of the salt in a concentrated form.

(7) The absence of purgation is not due to the want of water in the alimentary canal, but to its deficiency in the blood.

(8) Under ordinary conditions, with an unrestricted supply of water, the maximum amount of fluid accumulated within the canal corresponds very nearly to the quantity of water required to form a five or six per cent. solution of the amount of salt administered.

(9) If, therefore, a solution of this strength be given, it does not increase in bulk.

(10) If a solution of greater strength be administered, it rapidly increases in volume until the maximum is attained. This it accomplishes in the case of a twenty per cent. solution in from one to one and a half hours.

(11) After the maximum has been reached, the fluid begins gradually and slowly to diminish in quantity.

(12) *Cœteris paribus*, the weaker, or in other words, the more voluminous the solution of the salt administered is, the more quickly is the maximum within the canal reached: and accordingly purgation follows with greater rapidity.

(13) Unless the solution of the salt is more concentrated than ten per cent. it excites little or no secretion in the stomach.

(14) The salt is absorbed with extreme slowness by the stomach of the cat.

(15) The salt excites an active secretion in the intestines, and probably for the most part in the small intestine, all portions of this viscus being capable of yielding the secretion in almost equal quantities.

(16) The bile and pancreatic juice participate but very little in the secretion.

(17) The secretion is probably a true *succus intericus*, resembling the secretion obtained by Moreau after division of the mesenteric nerves.

(18) The secretion is promoted by local irritation of the intestine, as by ligatures, but only in the immediate vicinity of the irritation.

(19) Absorption by the intestine generally is reflexly stimulated by such irritation (the effect of numerous ligatures applied at points remote from the seat of the injected salt being to diminish the amount of purgative fluid by accelerated absorption).

(20) If the salt solution be injected directly into the small intestine, the stronger within certain limits the solution is, the greater will be the accumulation of fluid within the intestine.

(21) This difference is not observed when the salt is administered *per orem*, as the strong solution becomes diluted in the stomach and duodenum before passing into the intestine generally.

(22) The difference is due to the local action of the salt on the mucous membrane, and probably more to an impeded absorption than to a stimulated secretion.

(23) When the salt is administered in the usual manner, it appears, in the case of the sulphate of magnesia and sulphate of soda, to become split up in the small intestine, the acid being more rapidly absorbed than the base.

(24) A portion of the absorbed acid shortly afterwards returns to the intestines.

(25) After the maximum of excretion of the acid has been reached, the salt begins very slowly and gradually to disappear by absorption, which is checked only by the occurrence of purgation.

(26) During the alternations of absorption and secretion of the acid, it is the salt left within the intestine which excites secretion, the absorbed and excreted acid exerting no such action whilst in the blood, or during the process of its excretion, as Headland believed.

(27) The salt does not purge when injected into the blood, and excites no intestinal secretion.

(28) Nor does it purge, when injected subcutaneously, unless in virtue of its causing local irritation of the abdominal subcutaneous tissue, which acts reflexly on the intestines, dilating their blood-vessels, and perhaps stimulating their muscular movements.

(29) The sulphate of soda exhibits no poisonous action when injected into the circulation.

(30) The sulphate of magnesia is, on the other hand, powerfully toxic when so injected, paralyzing first the respiration and afterwards the heart, and abolishing sensation or paralyzing the sensory-motor reflex centres.

(31) Both salts, when administered in the usual manner, produce a gradual but well-marked increase in the tension of the pulse.

(32) According as the salt solution within the intestine increases in amount, there occurs a corresponding diminution of the fluids of the blood.

(33) The blood recoups itself in a short time by absorbing from the tissues a nearly equal quantity of their fluids.

(34) The salt, after some hours, causes diuresis, and with it a second concentration of the blood, which continues so long as the diuresis is active.

(35) As the intestinal secretion excited by the salt contains a very small proportion of organic matter as compared with the inorganic matter, the purgative removes more of the latter than the former from the blood. In certain cases a large quantity of the salts of the blood is thus evacuated.

(36) The amount of the normal constituents of the urine is not affected by the salt.

(37) After the administration of sulphate of magnesia much more of the acid than of the base is excreted in the urine.

(38) The salt has no specific action in lowering the internal temperature of the body, or has it only to a very small extent.

(39) It reduces, however, the absolute amount of heat in the body.—*Journal of Anatomy and Physiology.—American Journal Medica Science.*

A PORRO-MULLER OPERATION.

Dr. W. H. Parrish reported the following interesting case to the Philadelphia Obstetrical Society (*New York Medical Journal*):

Sallie Smith, a deformed dwarf, applied for admission to the Philadelphia Hospital in April, 1883. One of the internes placed her among the pauper women of the out-wards of the almshouse. There all the conditions surrounding the dwarf were such as to contribute to her physical deterioration. The women in that portion of the institution are unduly crowded, the ventilation is entirely inadequate, and the food of a character unfit for a pregnant woman. Her presence in those wards was unknown to any of the visiting obstetricians of the hospital until June 15, when Paline Root, M. D., one of the internes, ascertaining her pregnancy and her surroundings, conveyed the information to me. I at once had her transferred to the obstetric ward, where she was specially provided for, and her condition carefully investigated. She was a native of Philadelphia. She was unable to give her age—although dwarfs usually appear older than they actually are, yet, from what could be learned from her past life, from evident atheroma of her blood-vessels, and from her appearance, I concluded that she must be over forty years of age. Her parents were poor, were born in Ireland, and died in this city during her early infancy. She had been told that her father died of heart disease, and her mother of insanity at the menopause. She did not know how or by whom she was cared for during her early childhood. She attibuted her deformities to a fall supposed to have been received when she was a very small child. She was unable to walk until she was seven years of age. Her occupation, from the time she was first able to work, had been that of a house servant. Menstruation began at sixteen years, continued at the usual periods, but rather profusely, until the beginning of pregnancy. She could not recollect ever having been seriously ill. I learned from some of her acquaintances that for a number of years she had been of intemperate habits, repeatedly becoming intoxicated, and indulging in promiscuous sexual intercourse. Her bad habits led to exposure to inclement weather, and with the influence of cold and damp, doubtless led to the disease of the kidneys, to which I shall again refer. She was pregnant for the first time. The date of the last menstruation was given by her differently at different times. At one time she gave the 1st of October, at another time the middle of October, as the date when menstruation last ceased. She felt movement of child about the middle of February, though she was also uncertain in reference to the date. The fundus uteri reached nearly to the ensiform cartilage, and I concluded that the full period of pregnancy would be attained about the 10th or 15th of July. She was fifty-one inches high, the head small, mind sluggish, and memory defective; yet she was not an imbecile. The clavicles and and bones of the upper extremities, though small, presented no special deformities: they did not show the usual rhachitic incurvations. The right thorax was very prominent posteriorly and laterally; the left thorax markedly depressed posteriorly and laterally. Both lungs, but more especially the left one, were greatly encroached upon by the deformed thoracic walls. The heart was displaced upward and to the left, its apex being on a level with and external to the left nipple. Pulse 86, of good volume, but intermittent. Bowels moved daily; urination frequent. Urine contained one quarter albumin, and also granular and hyaline tube casts. The eyelids were slightly œdematous, but œdema was not recognizable in any other part of the body. The patient complained of frequently recurring frontal headache. At times things seemed darkened to her, and dark specks appeared before the eyes. She had never experienced convulsions, but occasionally had slight fainting attacks.

The vertebral column was markedly curved. The upper third of the dorsal region was slightly convex posteriorly, the lower two-thirds markedly convex posteriorly, and also decidedly convex to the right. The lumbar portion was convex anteriorly and to the left. A left anterior lumbar convexity, compensating for a right posterior convexity of the dorsal region. In the erect position, the lower ribs and the crests of the ilia seemed in contact, and the left iliac crest about one inch higher than the right. Posteriorly there was a deep depression at the sacro-vertebral articulation, and the posterior-superior spines were unduly approximated. Externally examined, the sacrum, in its upper two-thirds, seemed directed nearly horizontally backward. External measurements with a pelvimeter showed about fifteen centimetres, or six inches, between the posterior surface of the top of the sacrum and the anterior surface of the top of the symphysis pubis. Normally this measurement is about eight inches. Deducting three inches from the external conjugate of six inches would have made the internal or true conjugate three inches. The distance between the anterior-superior spines measured twenty-five centimetres, or about ten inches, the normal being about ten and a quarter inches. Between the widest portion of the crests of the ilia the distance was a little less than that between the anterior spines—that is, a little less than ten inches, the normal being eleven and one-half inches. The measurement between the crests being less than that between the spines, indicated the pelvis to be rhachitie, though it will be seen that the pelvis was not the more usual, typical rhachitic one. The external measurements did not indicate decided transverse narrowing of the true pelvis, though internal manual examination did show decided transverse narrowing. Repeated internal examination showed the promontory to be jutting forward, and the anterior surface of the sacrum to be nearly straight, and directed almost horizontally backward. The symphysis pubis was correspondingly inclided downward and backward. The oblique conjugate measured three and one-fourth inches, the depth of the symphysis pubis one and a half inch; hence, according to Lusk, deducting three-fourths of an inch from the oblique conjugate, I estimated the true conjugate to be two and a half inches. The transverse diameter of the superior strait was evidently considerably shortened, but I could not satisfactorily determine the degree of the shortening. The antero-posterior diameter of the excavation was taken to be less than the corresponding diameter of the superior strait, and all the measurements of the outlet less than the corresponding ones of the superior strait. The pelvis was diagnosticated to be a generally contracted one, with proportionally greater diminuition of the conjugates, and the general contraction increasing from above downward, so as to produce a somewhat funnel-shaped pelvis. The vaginal canal was narrow, the os uteri high up, and the uterine fundus markedly tilted forward. The abdomen was remarkably pendulous.

When the patient first came under our observation, pregnancy seemed to have reached about the end of the ninth lunar month, according to the most probable interpretation of the symptoms, and of the information she gave. The question arose, would it be best to produce a premature labor at the end of the ninth month, with a generally contracted pelvis, and a true conjugate of two and a half or two and three-quarters inches? I decided that, should a premature labor be attempted under such circumstances, craniotomy, or some other similarly dangerous operation. would be eventually necessitated, and that the dangers of such operation would be increased by the addition of those incident to the production of premature labor. Delivery with forceps, or by podalic version seemed out of question. There was a choice between craniotomy, symphyseotomy Cæsarean operation gastro-elitrotomy, and the Porro operation. In such a pelvis cranitomy would have been difficult and tardy, and has been shown, especially by Parry, to be attained with a mortality of mothers too large to compete with abdominal section. I did not prefer the Cæsarean operation, because of its excessive mortality to mothers in European hospitals; and because, of the six Cæsarean operations performed in hospitals in this country, all were fatal to the mothers. A condition almost essential to recovery after Cæsarean operation is rarely met with, even after normal deliveries, in hospital. I refer to sufficient retraction of the uterus. A flabby uterus after a Cæsarean operation leads to blood poisoning and to general peritonitis. The experience of many hospitals, as also *a priori* reasoning, would make the Cæsarean operation of very questionable justification in hospitals, especially in large maternities, and more decidedly still in general hospitals. The Philadelphia Hospital is not only a general hospital, but is also part of a large almshouse. Gastro-elytriotomy and symphyseotomy have given good results in the hands of a few operators, the former especially in America, the latter in Europe; but both operations have been performed with comparative infrequency, and the question of their respective merits cannot be determined by the very limited number thus far performed. I do not desire to discuss *in extenso* here the general question of the relative value of the different operations performed for the relief of advanced pregnancy in very small pelves. Among the considerations inducing me to adopt the Porro operation, with Müller's modification, were, the smaller mortality to mothers attending this operation in hospitals, and the opportunity it allows operators of selecting daylight, and of securing needed assistants.

The patient was placed under the influence of quinine, of Basham's mixture, and of occassional doses of the compound jalap powder. Woolen underwear and proper diet were secured for her. She was isolated from all lying-in women. Her condition did not improve, however, as the time for operation aproached; but, on the reverse, a persistent œdema of the face, more troublesome headache, and more marked disturbance of vision, with an increasing quantity of albumin in the urine—all pointed to steadily increasing uræmia. The time chosen for the operation was what was supposed to be the end of the thirty-eighth week of pregnancy. A large, well-lighted, well-ventilated room in the children's asylum, remote from the obstetric wards, and one that had for years been used as a private parlor, was selected in which to operate, and in which the patient was to remain after the operation. This room was divested of curtains, carpets, and furniture; its walls and floor were thoroughly scrubbed with carbolized water The room was then refurnished with chair, table, and a new bed. In short, every means was resorted to to improve, as far as possible, the unfavorable conditions incident to so large an institution as the Philadelphia Almshouse.

The members of the obstetric staff had agreed with me in the diagnosis of the patient's deformities, and also as to the propriety of the performance of a Porro-Müller operation. The patient was also kindly examined prior to the operation by Dr. Albert H. Smith, Dr. Robert P. Harris, Dr. M. O'Hara, and Emma Broomall, M. D. After receiving a full explanation of the nature of the operation, the patient gave her entire consent. The operation was performed on June 30, 1883, with the assistance of Dr. Duer, Dr. Keating, Dr. Musser, Dr. Stryker, Dr. Montgomery, Clara Marshall, M. D., and Dr. Bernardy, all members of the obstetrical staff, and also with the assistance of Dr. McLoughlin, warden of the hospital. There were present Dr. S. D. and Dr. S. W. Gross, Dr. Ellwood Wilson, Dr. J. L. Ludlow, Dr. Albert H. Smith, Anna Broomall, M. D., Dr. J. H. Brinton, Hannah Croasdale, M. D., and other physicians. On the morning of the operation the room was carbolized with the spray, but the latter was not used during the operation. All instruments were kept in a two-per-cent. carbolized solution, and Listerism, minus the spray over the patient, was observed in the different details. On the morning of the operation the patient received a general bath, and the bowels were moved by enema. A half-hour before the operation she received two ounces of whisky. Dr. Joseph Hearn, one of the surgeons of the hospital, and an experienced anæsthetizer, kindly administered ether during the operation. After etherization the bladder was emptied with the catheter. An incision was then made in the median line of the abdomen seven inches in length, extending from two inches above the symphysis pubis to about one inch above the umbilicus, passing to the left of the umbilicus. The slight bleeding from the lips of the abdominal incision was controlled by artery compressors before opening into the peritoneal cavity. The absence of intestine from in front of the uterus was ascertained by percussion before making the incision. The uterus was easily raised from the abdominal cavity.

Owing to the anterior lumbar curvature, and to the length of the incision, it was impossible to completely prevent the escape of intestines. After the uterus had been turned out, a protector, made of two layers of flannel, with an intervening layer of protective silk, was placed over the abdomen, the object being to avoid chilling, and to prevent the escape of blood and other fluids into the peritoneal cavity. This protector, when used, was wrung from a warm carbolized solution. The next step was to place around the cervix the wire of an ecraseur, and to constrict the tissues in its grasp to such an extent as to stop all circulation of blood through the uterus without cutting through the peritonaeum. This step required speed, care, and judgment. The liability of a loop of intestine or of omentum to be caught by the constricting wire had to be carefully guarded against. Immediately that sufficient constriction had been secured, a short incision was made with a pointed bistoury through the antero-uterine wall down to the placenta, for the placenta proved to be attached anteriorly. The incision was then rapidly extended, from near the neck to the fundus, with a probe-pointed bistoury, guided by two fingers of the left hand introduced into the incision. The blood pent up in the uterus by the constricting wire escaped freely, but did not enter the abdominal cavity. The incision passed to the external surface of, but not through, the placenta. The hand was immediately introduced into the uterus through the exposed membranes at the fundus, and the child quickly turned out, the placenta being in this manœuvre detached in main from the uterus. The cord was promptly tied and cut, and the child handed to Dr. Keating. It was asphyxiated when delivered, and presented a very unpromising appearance. It, however, quickly breathed, and cried under the effor's of Dr. Keating at resuscitation. The rapid resuscitation was effected by alternately dipping the child in basins of hot and of cold water. After removing the infant, the uterus, with both ovaries and both tubes, was amputated a half-inch above the constricting wire; this point was about at the internal os. It was then seen that the wire had completely controlled the circulation, and not a drop of blood escaped from the stump of the uterus. The next step consisted in passing obliquely through the stump two steel pins five inches in length, one above, the other below the wire. After this a strong carbolized silken cord was passed around the stump, in the line of the wire, and partly tightened. The wire was then cut and removed, and the silk cord then very firmly tightened and securely tied. Special care was given to the tightening of this cord and to the tying of a secure knot. The ends of the pins rested laterally on the abdominal walls, and under the ends, on each side, was placed a piece of sheet-lead. The stump was thus secured outside of the abdominal cavity, and rested at the lower angle of the wound. New carbolized sponges on handles were introduced into the peritoneal cavity, down into Douglas's pouch, but the entire cavity was free from blood or other fluid.

The abdominal wound was then closed by deep and superficial silver sutures. The deep ones were introduced so as to include the peritonaeum. During the introduction of the deep sutures, flat carbolized sponges were introduced beneath the incision, so as to catch what oozing might occur from the needle punctures. The external portion of the uterine stump was brushed over with carbolic acid, and then invested with lint saturated with carbolized oil. A strip two inches wide, of dry carbolized lint was placed on the incision; over this a few strips of rubber adhesive plaster were applied transversely; over these a thick layer of carbolized cotton, and over all a flannel binder. The patient was put to bed, and surrounded with pans of hot water. Dr. Montgomery took charge of the patient's general condition during the operation, and administered during its performance four hypodermic syringefuls of whisky. He reports that the time taken up in the operation, from the beginning of the abdominal incision until its complete closure, occupied forty minutes. During the operation the pulse ranged from 100 to 128, the greater frequency being during the making of the incision in the abdominal wall, and was probably due to impeded respiration. The constriction of the cervix had no appreciable effects upon the pulse. Soon after being put to bed, the pulse was 132, but in two hours was 108 per minute, and of good volume. The respiration during the anaesthesia became disturbed and imperfect, producing considerable cyanosis, and probably causing increased frequency of the heart's action.

The patient rallied well, as was shown by return to consciousness, by bodily warmth, and a fair pulse. For about sixteen hours her condition seemed very favorable, excepting that the kidneys had ceased to act. At the end of twenty-three hours there was marked change for the worse; the mind wandering, pulse, 140; temperature, 100° Fahrenheit. An inspection of the dressing at that time showed some oozing from the stump—perhaps six ounces—but it had then stopped. An additional ligature was placed around the stump, and one of the uterine arteries was separately ligated; the other could not be found; the stump was also brushed over with Monsel's solution. There was no subsequent oozing. That there should have been any loss of blood in this manner was a surprise to me, as the original ligature was so very firmly tightened and secured, and had for a number of hours after reaction so perfectly controlled all bleeding. There was marked atheroma of the vessels of the stump, as was revealed postmortem. After the twenty-third hour the patient grew progressively worse, became uncontrollable and delirious, had convulsive manifestations, and died in coma. There was no vomiting until twenty-six hours after the operation, and it recurred only once. She experienced but slight pain, and sulphate of morphine was given in small quantity—one-fourth of a grain hypodermically, soon after the operation; again, one-sixth of a grain at the end of eleven hours—and subsequently about the thirty-sixth hour, because of the great jactitation and the difficulty of keeping the patient in bed. The morphine was given hypodermically by Dr. McLoughlin in such small amount that the coma could not have been due to it. Eight hours after being put to bed the urine was drawn with the catheter. Subsequently the catheter was introduced at different intervals, but on each occasion the bladder was empty, and it was also found empty at the postmortem examination. Only three ounces of urine were secreted after the operation. The patient survived forty-two hours.

Dr. John Gillespie made a careful analysis and microscopic examination of the urine secreted after the operation, with the following report:

The specimen of urine from the woman upon whom the modified Porro operation was performed was examined, with the following result: The specific gravity was 1,023; reaction decidedly acid. The urine was of a dirty, yellowish-brown color, and contained a large amount of albumin (rather more than one-third). The amount of urea contained in the urine received by me was 10.5 grains for the entire amount. Therefore, if only three ounces of urine were excreted in forty-two hours, the total amount of urea excreted would be about fifteen grains. The sediment contained granular, hyaline, and epithelial casts, renal and bladder epithelium, and granular detritus and blood-corpuscles.

Dr. Wile, the acting pathologist of the hospital, conducted the autopsy, and I extract the following from the pathologist's records: On opening abdominal cavity several slight adhesions were found between the visceral and parietal peritonaeum in the region of the surgical incision. Blood-vessels around incision markedly congested. No exudation or other evidences of general peritonitis. Stomach and intestines distended with gas; spleen small, atrophic. Left kidney: Considerable displacement, found between sixth and seventh ribs. Somewhat lobular, on surface pea-sized cyst, which extends somewhat into the cortical substance of kidney. Cortex reduced, the seat of parenchymatous, solid, interstitial change. Right kidney: Position normal; shape altered, considerable flattening on upper surface; hilus very marked; capsule adherent, seat of parenchymatous change. Both kidneys in state of contraction. Pelvis: One ounce of bloody serum in Douglas's pouch. Peritoneal and subperitoneal tissue the seat of considerable œdema. Veins around vagina enlarged. Cervix uteri virginal; orifice round. Liver enlarged; fatty. Thorax: On the left upper anterior side, pleura adherent. Heart: Left side firmly contracted; right relaxed. Right auricle and ventricle seat of a firmly adherent chicken-fat clot. Left ventricle contained small amount of dark, slightly coagulated blood. Left ventricle markedly hypertrophied. Mitral valve, slight thickening. Papillary muscle considerably hypertrophied. Lungs: Hypostatic congestion; œdematous. Cause of death: Heart-clot.

Report of Histological Appearance of Kidney, by H. Wile, M. D. —The blood-vessels are for the most part congested, filled with corpuscles, and surrounded by a growth of connective tissue. The uriniferous tubules are found filled with cellular and granular debris. Some contain pigment, the result of slight haemorrhages. The epithelium lining of the tubules is granular, and in some places in a state of proliferation, indicating a catarrhal process. The growth of connective tissue between the tubules and about the Malpighian bodies is more marked in some places than in others, and the interstitial process may be regarded as fairly established. A careful measurement was made by Dr. S. D. Lazarus and myself after the pelvic viscera had been removed with the following result:

Superior strait:

Conjugate	3 inches.
Transverse	4 inches.
Right oblique	3¾ inches.
Left oblique	4 inches.
Oblique conjugate	3¼ inches.
Depth of symphysis	1½ inches.
Obstetrical conjugate	2¾ inches.

Excavation:

Conjugate	2¾ inches.
Transverse	4 inches.

Upper four sacral vertebræ directed horizontally backward; lower portion of sacrum and coccyx curved sharply forward.

Inferior strait:

Conjugate	2½ inches.
Oblique	2¾ inches.
Transverse	3½ inches.

A perpendicular to the plane of the superior strait is nearly horizontal, striking the abdominal wall about midway between umbilicus and top of symphysis.

A perpendicular to the plane of the inferior strait would strike the upper part of the third sacral vertebra.

The death of the dwarf must be attributed chiefly to the existence of interstitial and parenchymatous nephritis. She had rallied from the shock of the operation. There was no peritonitis, excepting in the immediate vicinity of the incision. It was too early for septic poisoning to produce death, and there were no indications that such had occurred. The loss of blood had been trifling, and death occurred too soon to be attributed to exhaustion from this cause. The acute and almost complete suppression of urine, the symptoms after the operation, the symptoms prior to the operation, and the results of examination of the urine of the kidneys after death, all pointed to the diseased kidneys as the cause of the fatal result to the mother. It is well to note that union had occurred throughout the entire extent ot the abdominal wound. There were adhesions between the small intestines and the parietal peritonaeum along the line of incision. The latter fact is of interest, viewed in the light of death in a few instances after laparotomy being attributed to strangulation of the bowel, due to constricting inflammatory bands. The child was of small size, and died at the end of three weeks, of inanition.

THE ACTION OF SALINE CATHARTICS.

Dr. Matthew Hay concludes the report of his investigation into the action of saline cathartics as follows (*Journal of Anatomy and Physiology*): They all tolerably closely agree in the ultimate effect they have on the alimentary canal and the body generally. They cause no irritation or inflammation of the canal; stimulate but in the smallest degree the secretion of the more important digestive juices, as the gastric, the pancreatic, and the biliary, have under ordinary circumstances, little action on the blood; and mainly act by increasing the intestinal secretion and by hindering the absorption of the intestinal fluid. Their purgative action is therefore very simple. They sweep out the contents of the alimentary canal with the least possible disturbance of the digestive system and of the other systems of the organisms. Few other purgatives, if any, have so simple an action. The value, therefore, which has long been assigned them in the treatment of the occasional disturbances of digestion, to which almost every one is at times subject, and where the indication seem to be to empty the canal "*cito, tuto, et jucundo*," is quite justified by the results of this investigation.—*Medical Times and Gazette.*

THE MICRO-ORGANISM OF CHOLERA.

The British Medical Journal of August 11th, states that M. Pasteur, who has just obtained a grant of fifty thousand francs from the French Chambers, to send a scientific mission to Egypt to investigate whether the cholera be not due to the development of a microscopic organism in the human body, gives the reasons which induces him to recommend the board of health to send out the mission in question. He says in a letter to the *Voltaire:* "I urged the sending out of this mission on account of the great progress that science has made, since the last cholera epidemic, respecting transmissible diseases. All diseases of this class that have been the subject of a thorough investigation, have led biologists to the conclusion, that they are caused by the development in the body, of man or animals a microscopic organism, causing therein disturbances, frequently fatal. All the symptoms of the disease, all the causes of death, are directly under the influence of the physiological properties of the micro organisms. What is needed at present, to meet the requirments of science is to ascertain the primary cause of the scourge. Now, the present state of our knowledge indicates that we should direct all our attention to the possible existence in the blood or in such or such an organ of an exceedingly minute being, whose nature and properties would, in all likelihood, account for all the peculiarities of cholera, both as regards its morbid symptoms and the mode of its propagation. The existence of that micro-organism once ascertained, would speedily settle the question as to the measure to be taken to check the spread of the disease, and might possibly suggest new therapeutic means to cure it." The mission consists of four physicians. M. Pasteur hopes that, by scrupulously attending to the hygiene precautions he has written down for them, the great danger they are incurring may be minimised.

SMALL DOSES.

The *Medical Times and Gazette* contains an article by Dr. J. C. Thorowood, in which he states the doses of many medicines as set forth in books are often needlessly large when a gradual alterative or specific action from the remedy is desired. Calomel and other preparations of mercury, given in repeated small doses, in his experience, have proved valuable in the treatment of peritonitis, pleurisy and pericarditis. He gives an example: A lady with knees drawn up in bed, rapid small pulse, black tongue and incessant vomiting. She had been confined about five days previous, and was taking repeated doses of opium. The opium was withdrawn and calomel administered in one third grain doses every two hours. Under this treatment the vomiting ceased and convalescence set in.

The dose of tincture of aconite is from five to fifteen minims (British Pharmacopœia) but better results have been obtained from a dose of one or two minims every two hours in commencing inflammation.

The writer knows of no drug so generally useful in the treatment of asthma as arsenic, and in fifteen years' experience has seen a great many cases of spasmodic asthma that seemed to get quite well under the influence of small doses of arsenic. He never exceeded the dose of three minims of either Fowler's solution or of liquor sodæ arseniatis three times in the day.

In his hands excellent results have been obtained from a persevering use of very small doses (one fiftieth of a grain) of strychnia in promoting the restoration of exhausted nerve function, while larger doses do but add irritation and eventually increase the exhaustion. Tincture of nux vomica taken in doses of one to two minims fasting, every morning is very useful in the cure of chronic constipation of the bowels while five or ten minim doses three times daily act very much like quinine in checking the action of the liver, and causing disturbance of system.

CAUSES OF INSANITY.

In the first of a series of lectures to be delivered at Westminister Hospital, England, by Dr. Sunderland, he summerizes the causes of insanity as follows:

(1) THOSE AFFECTING THE HUMAN RACE GENERALLY.—*Season:* —Hot weather is a potent cause. *Civilization:*—Humbolt has stated that there is no insanity among savages. Undoubtedly the abuse of the advantages of civilization has added admissions to asylums. *Impure water:*—The presence of lime and magnesia in water is a cause of cretinism. *Poverty:*—Statistics show that poverty is a most powerful agent in the production of insanity. *Age:* -The more advanced in years the greater tendency to insanity. *Sex:*—The proportions of men and women attacked differs in different places. *Occupation:*—Head-workers are more liable to insanity than hand-workers. Overwork is seldom a cause unless other influences are connected with it.

(2) CAUSES AFFECTING THE INDIVIDUAL.—*Hereditary influences:* —The number of persons going mad, whose ancestors have suffered from hereditary insanity or other nervous diseases should not be placed at less than fifty per cent. Baillarger states that the insanity of the mother is more likely to affect the children than is the insanity of the father; that the mother's insanity is most likely to affect the girls of the family and that the father's is most likely to affect the boys. Epilepsy and other nervous disorders in the parents often appear as insanity in the children. The connection of phthisis with the same family is an undisputed fact. Syphilis and drunkeness in the parents are often the causes of idiocy in the child or insanity in the adult offspring. *Causes operating at birth:*—All elements by which the process of parturition is unusually prolonged are very frequent causes of idiocy in the offspring. Hence late marriages on the part of the female should be discouraged if the mental health of the next generation is to be considered. *Causes operating in infancy:*—All ignorant treatment of the ailments of childhood, as by drugging with opium or spirits, are potent causes of idiocy or insanity of early life. Injuries to the head, exanthemata, whooping-cough, or convulsions at dentition are sometimes followed by idiocy. *Causes operating in youth:*—Any brutality, or over-indulgence during childhood may result in mental disease in adult life. The advent of poverty is an event which not

unfrequently causes alienation in girls. *Causes in adult life:*—Sexual excess in male or female, is perhaps, next to heredity, the most potent cause of insanity. The troubles of the female at the periods of menstruation, pregnancy, parturition, lactation, and the change of life, and all disorders of the uterus and ovaries. Alcoholic excess, abuse of tobacco, opium and other sedatives. *Causes in old age:*—Simple decay from old age may produce complete loss of the mental faculties. It is at this age and in this state of mind that old men are induced by designing people to make wills and execute documents by which nearest relatives are excluded from property they have all their lives expected to enjoy.—*Medical Times and Gazette.*

EXCISION OF STRUMOUS GLANDS.

Dr. Henry H. Lediard, Surgeon to the Cumberland Infirmary, England, communicates to *The Lancet* two cases of chroncally enlarged, suppurating glads in the neck successfully treated in the above manner. He regards this method as a safe and ready way to hasten the natural process of cure in such cases where glands are chonically enlarged and caseous. Better results will be obtained where the glands are firm, for then the terminus can be fixed by a thread or otherwise and dissection rendered easy. The knife is probably required to divide the skin only, fingers and forceps will do the remainder. In softened glands excision is impossible. but a tear in the capsule will admit a spoon, and the contents of the capsule may be easily scraped out. In both of his cases the results were very satisfactory. If this method were generally adopted, fewer cases of disfiguring scars on the neck would be seen. Plenty of enlarged glands about the body yield to rest and medicinal treatment but these are not the cases under considerations. Billroth has operated ninety-four times, a great number of his operations have been vesy successful; some of them long and bloody; a few have proved fatal.

THERAPEUTICAL DRINKING OF HOT WATER.

In an article on "The Origin and Use of the Therapeutical Drinking of Hot Water," (the *Lancet*, England), Dr. Ephriam Cutter, of New York, claims this valuable contribution to medicine as wholly American. The practice dates back to 1858, when Dr. James H. Salisbury, of New York, concluded a series of experiments on feeding animals to ascertain the relations of food as a cause and cure of disease. Among other things he found that the fermentations of food, and the products of these fermentations were the chief primary factors in producing the diseases which arise from unhealthy alimentation. With the idea of removing the disease by removing the cause he employed water. At first he used it cold, but this caused distress, pain and colic; luke-warm produced nausea and excited peristalsis upwards; then the temperature of the water was increased to 110° to 150°. This was well born and exciting normal downward peristalsis of the alimentary canal, washed down its contents. It was sometime before the following details were settled in order to obtain the best results:

(1) The water must be hot, not cold or luke-warm. It should have a temperature of 110° to 150°, such as is common in the use of tea or coffee. In cases of diarrhœa the hotter the better, but in cases of hemorrhages the temperature should be at a blood heat. (2) The specific gravity of the urine is made the guide for determining the quantity of water to be taken. The urine of the patient should be made to conform to the health standard a specific gravity varying from 1015 to 1020 If the urinometer shows the specific gravity to be higher than this standard, more hot water must be taken: but if it indicates a less specific gravity than 1015 too much is being drank. The urine to be tested should be voided just after rising from bed in the morning. The amount will vary with the temperature of the atmosphere, amount of exercise, sweating, etc., but should be in quantity from forty-eight to sixty-four ounces. The urine should be clear, characteristic, straw color, free from odor, and deposit on cooling. The quantity of hot water to be taken to accomplish these results will vary, but twelve to fourteen ounces will be found the average quantity. (3 The time for taking the hot water that gave the best results and the least discomfort was one hour to two hours before each meal, and half an hour before retiring to bed. If given too soon before meals it is apt to produce vomiting. Should the patient be thirsty between meals hot water can be taken at any time between two hours after a meal or one hour before the next meal. (4) In drinking the hot water it should be sipped, and not drank so fast as to distend the stomach and make it feel uncomfortable. (5) A period of six months is generally required to thoroughly renovate the liver and intestines. The drag on human existence from the effects of fermentation, foulness and indigestible food is removed and a wonderful elasticity and buoyancy given to life. (6) If it is desired to make it palatable aromatics can be added. In cases of intense thirst and dryness a pinch of chloride of calcium or nitrate of potash may be used to allay the thirst and leave a moistened film over the mucous surfaces. In diarrhœa, cinnamon, ginger and pepper may be boiled in the water and the quantity lessened. For constipation a teaspoonful of sulphate of magnesia, or a small quantity of some laxatine may be used in the hot water. (7) Not more than eight ounces of any liquid should be drank at a meal. (8 The effects are shown by the improved feeling of the patient. The fæces become blackened with bile, but the

intolerable fetid odor of ordinary fæces is abated; showing that the fetid odor of fæces is due to a want of a proper washing out and cleansing of the alimentary canal from its fermenting contents. The skin becomes healthy; perspiration free; digestion correspondingly improved; thirst disappears in a few days, and the mucous membrane and skin become moist. Ice-water in hot weather is not craved, and inebriety is destroyed. (9) The general considerations on the therapeutic drinking of hot-water are: (*a*) Foundation for all treatment of chronic diseases. (*b*) Excites downward peristalsis. (*c*) Relieves spasm or colic of the bowels. (*d*) Dilutes the ropy secretions of the whole body. (*e*) Inside bath. (*f*) Dissolves the abnormal crystalline substances that may be in the blood or urine. (*g*) Necessary to have the hot water out of the stomach before meals. (*h*) Its use is to wash down the bile, slime, yeast and waste, and have the stomach fresh and clean. (*i*) Promotes elimination everywhere. (*j*) The gas that sometimes eructates after drinking hot water is not formed by the hot water, but was present before, or swallowed in the act of sipping. (*k*) These facts were founded upon physiological experiments at the outset, and verified from the treatment of thousands of cases since 1858.

PHYSIOLOGICAL PROPERTIES OF DOUNDAKÉ AND DOUNDAKINE.

The doundaké is a shrub of the rubiaceæ family, and is found on the western coast of Africa. The bark, employed by the natives as a febrifuge, has a very bitter taste. Messrs. Bochefontaine, Féris, and Marcus have isolated an organic base from the bark—a yellowish powder, formed of microscopic rhombohedral crystals. This powder is bitter, soluble in water and alcohol, and of an alkaline reaction. In Winkler's fluid it precipitates phosphotungstic and phosphomolybdic acids. The experimenters have given it the name "doundakine." Its action on the frog is as follows: The hypodermatic injection of one-eight grain of doundakine, representing thirty grains of the bark, produces death in thirty-six minutes. The physiological effects of the bark and doundakine are identical, and may be stated as follows: In the frog, in from two to five minutes, there are noticed a little feebleness and diminution of spontaneous and reflex movements, the frog being incapable of assuming a normal position. Placed in any particular position, he remains so without attempting to change it. Muscular contractility and nervous excitability were maintained, and the heart's action was not sensibly modified. The first period is followed by a second, in which the respiratory movements are irregular and then intermittent, become slow, and are finally arrested, while the heart-beat is regular, though somewhat slower. The reflex movements are gradually abolished.

The same results are obtained when the experiment is made on a frog from which the brain has been removed. But if the cord is cut at the level of the calamus, the frog dies without presenting the above phenomena. The striking fact of the action of the drug is the progressive slowing and arrest of respiration, which takes place while the heart's beat is perfectly regular. The experimenters conclude that doundakine is a toxic agent, acting more particularly on the medulla and cerebellum, and inducing a cataleptic state.—*Gaz. Hebdom.*, August 1883.—*Medical News.*

NEW THEORY OF ALBUMINURIA.

At a recent meeting of the Paris Academy of Medicine, M. Semmola, of Naples, brought forward a new theory with regard to the causation of Bright's disease. This malady he regards as not essentially renal, but as consisting in a general morbid alteration of nutrition, and observes that albumen in such cases is not passed by the urine only but by all the secretory organs. This alteration deprives the albuminoid materials of the blood of their power of being assimilated, and so causes their excretion by the emunctories. The renal leisions he ascribes to mechanical irritation of the tubules of the kidney by the constant passage of albumen through them. Albuminuria is therefore a cause, not a result of renal disease. M, Semmola founds these views on a series of experiments on animals. He injected into the blood-vessels various substances containing albumen, as white of egg, milk, and blood serum, with the result of inducing artificial Bright's disease. White of egg was most active in this way. He, therefore, concluded that the more nearly albuminoids approach the character of serum-albumen, the less likely they are to injure the kidneys by irritation, and *vice versa.*—*Progrès Médical.*—*Practioner.*

MISCELLANEOUS ITEMS.

Dr. Gamble says: I have been afflicted with periodical sick headache for about twenty-five years. Celerina has given me more relief than anything I have ever used. I think as a nerve tonic it is par excellenca.

Eczema of the Scalp in Infants.—The *British Medical Times and Gazette* contains the following formula of Dr. Lassar: Salicylic acid one, tincture of benzoin two, and vasline fifty parts. A certain quantity of this is smeared over the scalp two or three times a day, after having washed the infant's head with soap and water. To soften the crusts and facilitate the cleansing of the scalp Dr. Dassar reoommends the employment of oil containing two per cent. of salycilic acid.

THE

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ORIGINAL ARTICLES.

VALUATION OF THE FLUID EXTRACT OF RHUBARB

BY R. H. OSTRANDER, PH. C., MILAN, MICHIGAN.

Rhubarb, according to "Watts' Dictionary of Chemistry," and to several analysis made by such chemists as Dragendorff and Greenish, owes its value to two principles; cathartic acid acting as the purgative principle and chrysophan and tannin acting as the tonic principle.

Therefore the object of this analysis was to compare the different samples of the fluid extract of rhubarb of the market with one another as to the per cents. of these principles. For this analysis I used eight samples. In order to estimate the active principles it was necessary to remove the mucilaginous matter. So it was also estimated.

The scheme of analysis used was similar to the one used by Professor Dragendorff in his analysis of the crude drug, found in the *Pharmaceutical Journal and Transactions*, Volume VIII, in the years of 1878 and 1879, pages 826 to 829; also found in the *Pharmaceutical Journal and Transactions* of 1878 and 1879, pages 933 to 936.

For the estimation of the mucilaginous matter 26 grammes of the fluid extract were taken and evaporated to a syrupy consistence, allowed to cool, and fifty cubic centimeters of stronger alcohol added; the mixture shaken thoroughly and allowed to stand for twenty-four hours. The precipitate was then carefully collected on a tared filter and washed thoroughly with stronger alcohol. The precipitate was dried at 110° centigrade, weighed, and the per cent. of mucilaginous matter calculated. The results varied from 2.95 to 8.18 per cent.

For the estimation of cathartic acid, the filtrate was taken and evaporated to a syrupy consistence, allowed to cool, 120 cubic centimeters of absolute alcohol added, and the whole allowed to stand for twenty-four hours. The precipitate was then carefully collected on a tared filter, washed thoroughly with absolute alcohol, then thoroughly dried at 110° centigrade, cooled, and weighed, and the per cent. of cathartic acid calculated. The results varied from 1.44 to 6.29 per cent.

For the estimation of chrysophan and tannin, the filtrate, after the removal of cathartic acid, was evaporated until the alcohol was nearly all driven off. To this was added (as long as a precipitate was produced) the acetate of copper, precipitating chrysophan and tannin as chrysophanate and tannate of copper. This precipitate was carefully and rapidly collected on a tared filter, washed thoroughly with distilled water, then dried at a temperature of 130° centigrade, cooled and weighed. After deducting the per cent. of copper oxide present the remainder was taken as the chrysophan and tannin. The results varied from 6.88 to 16.42 per cent.

In comparing the results obtained from the analysis of the different samples, as regards their active principle, sample number five contains the most cathartic acid and sample number two contains the most chrysophan and tannin. The following is a tabular statement of the per cents. found in the different samples.

Samples Fluid Extract of Rhubarb.	Mucilaginous Matter.	Cathartic Acid.	Chrysohan and Tannin.
No. 1	3.5	4.15	15.43
No. 2	6.14	2.12	16.42
No. 3	6.53	2.16	6.88
No. 4	2.95	1.44	8.58
No. 5	8.18	6.29	8.83
No. 6	6.28	3.35	10.47
No. 7	5.91	5.03	7.64
No. 8	4.82	4.86	8.93

EDITORIAL BRIEFS.

With this issue of The Physcian and Surgeon, the managing editor retires from the staff. For five years, we have labored earnestly to give our patrons the latest and best information in medical science. To what extent we have succeeded in this, our readers will be the best judges. The labor has been arduous, but by no means unpleasant. The encouragement which we have received from the beginning and continously has been truly gratifying. When we began, our friends feared, and our enemies predicted, a failure. To-day the journal is a financial success, and we leave it in a good healthy condition. As we have never heretofore spoken in our own praise, we may now say that, in the matter of translations especially, we have been complimented. We can, with all modesty state, that since the appearance of this journal, there has been markedly more attention given to current foreign literature than had been the case hitherto.

The demands upon our time from other sources render it necessary for us to resign editorial work. For our successor, Dr. George A. Hendricks, a young man of energy and ability, we bespeak your good will.

DR. SUTTON AGAIN.—In the December number of the *Detroit Lancet* is the following:

119 PENN AVENUE,
PITTSBURGH, PENNSYLVANIA, November 30, 1883.

LEARTUS CONNOR, A. M., M. D., Detroit, Michigan:

DEAR DOCTOR—Under the head of "Professional Courtesy," in THE PHYSICIAN AND SURGEON, there has just appeared an attack upon you so *unscrupulous, untrue and unjust* that I hasten to say a word about it. I wrote the letter in the *Cincinnati Obstetrical Gazette* from which you made an extract. I now state to all interested that you did not know to whom that extract referred.

I made that statement on the authority of Dr. Keith. I believed it to be true. In the *Age* I see a few lines purporting to be from a letter of Dr. Keith. If the owner of that letter, who was so prompt to announce himself as the only man in Michigan who had published a series of ovariotomies, and who says I lie and libel him, can prove it by the publication of that entire letter, let us have it. I am ready.

Very truly yours, R. S. SUTTON.

There are only two points in this letter to which we will at present attend. How does Dr. Sutton know that Dr. Connor did not know to whom the extract referred? Does Dr. Sutton carry Dr. Connor's mind around with him in his pocket? Dr. Sutton's certificate is highly complimentary to Dr. Connor's intellect.

In the second place, Dr. Maclean did not announce himself as the only man in Michigan who had published a series of ovariotomies; but as the only professor of surgery in Michigan who had done so. The man who can stoop to such littleness as thus to misrepresent, in a discussion, must be a monstrosity morally and all attempts to make a decent man out of him will fail.

By the death of Dr. J. Marion Sims, medicine has lost one of its most gifted sons. He may be called the founder of gynæcological practice. In the history of medicine his name will rank with those of Hippocrates, Galen, Harvey and Hunter.

CORRESPONDENCE.

CONCERTED ACTION BY STATE BOARDS OF HEALTH.

Reported for THE PHYSICIAN AND SURGEON.

There has been a growing conviction among leading sanitarians intrusted with the official execution of practical health measures, that while the work of the American Public Health Association is of inestimable value in promoting the interests of sanitary science and sanitary reform, there is a constantly increasing need for an annual conference of State and other health officials in regard to practical affairs of their every-day work, some part of which work cannot profitably be discussed in a public meeting consisting largely of persons not familiar with its details.

After due consideration a meeting of representatives of State boards was held at Detroit, during the recent meeting of the American Public Health Association, at which, after discussion, it was decided to call a meeting of the secretaries or other representatives of all State boards of health, in Washington, during May, 1884, for the purposes mentioned, and with the view of organizing a section devoted to State board work in the present association, of a permanent separate organization especially adapted to the needs of State boards of health. Drs. Henry B. Baker, of Michigan, and J. N. McCormack, of Kentucky, were appointed a committee to confer with and secure the coöperation of all the State boards in fulfilling the object of the meeting, and Drs. C. W. Chamberlain, of Connecticut, J. E. Reeves, of West Virginia, and Stephen Smith, of New York, were appointed a committee on organization, to report at the meeting in May. The American Medical Association meets in Washington in May; and another reason for holding the meeting in Washington is that the representatives of the State boards may also have an opportunity for conferring with the senators and representatives in Congress from their respective States, in regard to national sanitary legislation. It would seem that whenever the health authorities from all the States shall meet, discuss, and agree upon the course they will pursue with respect to yellow fever, cholera, small-pox, or any disease which endangers public health without regard to State lines or borders, and whenever all State boards shall act in concert, considerable progress will have been made in solving the problem of what are the best methods for national action in regard to inter-state and maritine quarantine or inspection and disinfection, as well as in the practical control of epidemic diseases within the several States of this country.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.

EDITOR OF THE PHYSICIAN AND SURGEON: *Dear Sir*—The meeting of this Association recently held in Detroit was one of the most pleasant and instructive conventions which it has ever been the good fortune of your correspondent to attend. The sanitarians of this country are a good, jovial class of men. Besides, the people of Detroit did much to make the gathering a pleasant one. However, we were surprised at the small number of citizens in attendance. Probably the boasted healthfulness of Detroit—which is not borne out by the mortality reports—leads the dwellers of that fair city to suppose that they need no instruction in sanitary matters. Be this as it may, the attendance was small. The *Free Press* and *Post* made excellent reports of the meetings, and I have taken the liberty of largely quoting from the former in writing this letter. I was frequently so deeply interested in the papers being read and the remarks being made, that I did not care to interrupt my listening in order to take notes.

Texas Cattle Fever.—The first paper was by Dr. Salmon, of the Department of Agriculture, and I send you the excellent synopsis as it appeared in the *Free Press:*

"It is epizootic in nature, contagious as to members of the same herd and rapid in its progress. The spleen, kidneys and liver are invariably enlarged and the bladder filled with bloody urine. The Texas cattle upon their native ranges are invariably afflicted with it, and their introduction to Western and Northern markets is causing it to be known at most stock-yards. Yellow fever is regarded as a terribly fatal disease, but it is not half so fatal as this cattle fever. Texas cattle carry the contagion to foreign pasture, even as ships carry yellow fever to foreign countries, though no case ever occurred on board. Cattle carry the disease germs in their hair, in the stomach and the alimentary canal. If our Northern cattle are to be saved from contagion a barrier must be erected against Texas cattle. It is not for me at this time to recount the hundreds of outbreaks of this disease now on record which have followed the thoughtless introduction of Gulf coast cattle to the feeding grounds of the North. You cannot dispose of them with the declaration that there is no such rigorous analysis of facts as shows the conclusions drawn to be inevitable. They are inevitable, and for this reason:

"Among the thousands and tens of thousands of cattle which have been affected at the North, and some of which have been located in every Northern State, not one case has occurred where it could not be shown that the animal had an opportunity to be infected by cattle from the distant South. Last year we had a report from away up in Dakota that cattle were dying with certain symptoms which reminded us of Texas fever, but not a word about Texas or Southern cattle. We wrote to know if any animals had been introduced there from the South, and received a reply that thirty-one head had come from Mississippi; but as they were all well, it was not supposed they could have brought the disease.

"In a similar manner there were outbreaks last year in Kansas, Missouri, Illinois, Ohio, West Virginia, New York and New Jersey, every one of which was traced to cattle from the infected districts of the South. Why is it that a disease with the characteristics never occurs at the North unless Southern cattle have had access to the pastures?

"This disease differs from all others sufficiently in its characteristics to make its diagnosis a matter of considerable certainty. I repeat, it is only seen at the North in districts where Southern cattle have been introduced the same season; it affects Northern cattle taken to the South; the district from which cattle are dangerous corresponds exactly to that which is dangerous to Northern cattle. It matters not what we call the disease; the facts remain, and this association must accept them, or lend its influence to the propagation of error.

"We are just now in need of laws to prevent the dissemination of this disease; to check the gradual advance of the district permanently infected with it; to exterminate it, where possible; and we feel the need of the encouragement, if not the active support, of sanitarians generally, and especially of such influential sanitary associations as this.

"It is too late to decide that Texas fever is a chimera; too late to try to explain away the terrible losses that have been traced only too certainly to the cattle from Southern ranges; too late to try to convince the Northern stock owner that sanitary regulations are not demanded for these animals; too late to try to wipe out the accumulated experience of a century. The hundred who have lost their all through ignorance of the existence and character of this plague; the thousands of square miles of territory that are ravaged almost annually, are enduring evidences of the reality of Texas fever."

Hog Cholera.—The following is the abstract of Dr. Partridge's paper on this subject:

"As cholera or yellow fever prevails most in densely populated districts or in cities, so this disease has prevailed almost exclusively in the corn and pork producing regions of the Northwest; and that not on account of any climatic or inherent local causes, but because of an abundance of material on which it may be fed and developed. It may prevail at any season of the year, and while it is more contagious and fatal in summer, it is by no means exterminated or suppressed by the frosts of winter. A multitude of postmortem examinations have revealed, in all cases, essentially the same morbid processes or pathological conditions. The seat of disease is not restricted to any organ or set of organs, but may be found in the lungs, heart, liver, spleen; in all mucous membranes, especially the intestines. In all cases the lungs and lymphatic glands are affected, and generally the intestines.

"The increased temperature of the body is the most constant and unvarying symptom of the disease, the thermometer indicating from 104 to 106, and in one instance 111 degrees. Dullness of the eyes, lids partly closed and an accumulation of secretion are other symptoms. There is hanging of the head, lopped ears, and an inclination to hide in the litter, lie on the belly and keep quiet. As the disease advances, the animal manifests more or less thirst, some cough, and a pink blush, or rose colored spots, and a papular eruption appears on the skin, particularly along the belly, inside of the thighs and forelegs, and about the ears. There is accelerated respiration and circulation, increased action of the flanks in breathing, arched back, loss of appetite and tenderness of the abdomen. In some cases large abraded spots are observed at the projecting points of the body, caused by separation and loss of the epidermis. In such cases a slight blow or friction of the skin is sufficient to produce such abrasions. Some animals emit a very offensive odor even before death, and where the disease prevails extensively in large herds this offensive effluvia can be detected a long way to windward.

"Dr. Detmers appears to have discovered a new order of bacteria, which he named Bacillus Suis, as being peculiar to this disease of swine, or he more properly regards it as the swine plague (Schizophytæ), for, failing to inoculate healthy animals with virus from which these germs had been removed, he concludes that these Schizophytæ are the true seeds of swine plague. These germs, being found in all fluids, in the urine, blood and mucous, in the excrements and in all diseased tissues, are regarded as the true infectious principle. The presence of such immense numbers of these germs in the excrements and other morbid products of swine, leads to the conclusion that they are undoubtedly the principal disseminators of the plague. The vitality of these germs in substances undergoing decomposition is soon lost, but in a suitable substance or fluid, like water containing a slight mixture of organic matter, as in brooks or ponds, their vitality is retained for several weeks.

"Numerous experiments have been made by inoculating healthy animals with morbid secretions, which had been kept in a dry state five and six, and in one instance for twenty-six days, and in each case the disease was promptly developed. A specimen of dried mucous membrane was preserved for thirty days in dry bran, when it still manifested vitality by developing the disease. Even freezing does not impair their vitality. The stage of colonization or development of these Schizophytæ is considered the period of incubation of the disease, and requires from five to fifteen days; generally about seven days.

"The infectious principle from which swine plague is developed may be introduced into the system by food or drink, or it may be taken into the circulation direct by cuts or abrasions. It is believed that the germs of this disease may be carried through the air for the distance of one or two miles, but they are harmless if they fall upon the unabraided external surface of the body or on perfectly healthy lung tissues. As a preventive measure, all cuts or sores should be kept closed by an application of tar, or some substance that is impervious to air and water. In warm weather stagnant pools of water breed disease germs and are a fruitful source of danger. Old straw stacks may absorb and retain the disease germs for weeks and months. Freight cars retain them an indefinite length of time. The feeding of sulphur, salt or ashes, or placing them near swine is a preventive, but carbolic acid is best. The dose is ten drops to each one hundred pounds weight of the animal, to be given three times a day. A solution of this acid should be freely sprinkled about the premises. Remove or destroy the sick. Separate the healthy into small herds, and remove them to fresh pastures, and use the carbolic acid treatment."

The afternoon session of the first day offered a programme especially attractive to all medical men. The old subject of malaria was to be discussed by three army surgeons, Drs. Sternberg, Woodhull and Smart, men whose clinical experience had been great, and all of whom have done much experimental work on the subject. Drs. Sternberg and Woodhull held earnestly to the swamp theory of the origin of malaria. Dr. Sternberg compared the number of cases per thousand occurring among the soldiers at various stations in the country. From this comparison he showed that the disease prevails much more extensively in southern and marshy places. The testimony which he has collected on this point is of great value. Dr. Woodhull deprecates the tendency manifested by some medical men to abandon the marsh theory. He admits that the theory does not explain all the phenomenon, but he claims that it is the most consistent theory. Dr. Smart pointed out the possibility of malaria being due to bad drinking water. He thinks the marsh theory untenable; for the disease knows no latitude nor longitude and prevails at all altitudes. This paper was the most valuable one, in our opinion, on the subject. Dr. Smart states that even snow often contains considerable organic matter, and the cool, clear mountain torrent may furnish a water which is detrimental to the health of the drinker. The one great prophylactic is to secure pure drinking water. Thorough filtration is necessary. As a member of the National Board of Health, Dr. Smart has done a large amount of skillful work in the analysis of water, and his assertions are worthy of consideration.

The evening session opened with an excellent address by Governor Begole, who complimented the doctors most highly as is shown by the following extract:

"It affords me great pleasure to extend to you, on behalf of the good people of this State, a most cordial welcome.

"The assembly of an association like this, composed of men of scientific attainments, and who, laying aside the ordinary pursuits and private interests, have left their homes, at their own charge, to consult and plan for the interests of our common humanity is an encouraging sign of the times.

"The cure of diseases we are accustomed to regard as the peculiar work of the skilled physician. It is most gratifying to find that among all the different schools of medicine the men who occupy the front rank are vieing with each other as to who shall be foremost in imparting to the public such information as shall tend to prevent disease or limit its spread. It certainly speaks well for the unselfishness of the profession.

"If before the end of my official term I can have the pleasure of welcoming to the State a convention as truly representative as this, composed largely of men learned in the law, and met to devise means by which litigation may be avoided, and to impart to the public such information as will do away as far as possible with the necessity of employing counsel, I shall feel like saying with Simeon of old: 'Lord, now lettest thou thy servant depart in peace, . . . for mine eyes have seen thy salvation.'"

In the absence of the mayor, Dr. Brodie welcomed the members to the "fairest and most healthy city on the globe."

Dr. Avery, President of the Michigan State Board of Health, spoke in behalf of the Board.

Dr. Hunt, of New Jersey, President of the Association, then delivered a scholarly and interesting address. Your space will not permit of even a synopsis of this paper, which will be studied thoroughly by many when the transactions are published.

On the second day the discussion of malaria was continued by a paper by Dr. Webb, of Alabama, on "Changes in types of Malarial Fever in Sumpter county, Alabama."

Colonel Warning made the following remarks on the malaria of Washington:

"The average reduction of water below the surface in England, and many sections of this country, does not exceed two and one-half feet. If water lies within that distance of the surface, there is a constant evaporation to the atmosphere sufficient to cause malaria. As to the Potomac marshes, soon to be filled up, he had ever contended that there is no connection between these marshes and the malaria that prevails there. On the contrary he is satisfied that the malaria germs come from a swamp that was filled up some years ago. It was not drained, and the water lies there stagnant beneath the earth that was filled in. Consequently he predicts an increase of malaria in Washington after the Potomac marshes shall have been filled."

The discussion on this subject was engaged in by several, taking the remaining hours of this session.

During the afternoon the subject of the adulterations of foods was discussed in two papers, by Dr. W. K. Newton, of Patterson, New Jersey, and Professor Leeds, of Hoboken. The former of these papers was especially full and valuable. He thought that there is a necessity for laws that should forbid adulteration. In European countries a vast amount of work has been done in this direction, but the results are not very encouraging. He gave different statistics showing the extent to which articles are adulterated in the continental countries, and compared them with similar statistics relating to this country. He did not consider oleomargarine to be injurious, as many suppose, but as a good substitute for real butter. The favor in which it is held is attested to from the fact that in New York City alone there are no less than four factories manufacturing over 4,500 tons of it annually. Glucose he also considered as perfectly harmless. Canned fruits should be used with caution, as often decayed or unwholesome matter is used in their manufacture. Bread was very seldom adulterated in this country. Occasionally, however, alum is used in its composition to make it of snowy whiteness; and the quality of the bread is not bettered thereby. The adulteration of milk, he said, is confined almost exclusively to the addition of water, thus increasing its bulk. There is great danger of adulterated milk spreading contagious diseases, the milk acting as a carrier, since it is capable of absorbing all kinds of odors and gases.

In most of our large cities the system for the inspection of meats is very defective, since it provides only for examination of meat after it has reached the market. The meat, he thought, should be inspected when the animal from which it comes is yet alive, and previous to the slaughtering.

Professor Leed's paper, read by Professor Kedzie, stated that spices were adulterated to a great extent, but only such substances were added as were purely non-poisonous. Mustards were never to be found pure. Vinegars were also highly adulterated. Competent officers, who shall be specialists, should be appointed in each State to examine manufactured and natural foods to detect adulteration. So far these examinations have been made by college professors. The State Boards of Health should take the matter in hand and see that it has the proper attention.

The general discussion of the subject was led by Dr. Vaughan. He said that adulterations were of two kinds—those that affected the health, and those that affected the pocket. The former can be prevented only by governmental interference. Those that affect the pocket are always entirely borne by the poorer classes, the very people who can afford it least. The remedy for this evil is found, he said, in arbitration, by which he meant education. When the people are sufficiently educated so that they cannot be imposed upon, the evil will go.

Dr. Kedzie said he knew of a family in Hudson that was made very sick by eating glucose syrup. Examined it and found free sulphuric acid in the barrel in considerable quantities. An opinion is largely held that glucose is not used to adulterate high-grade sugars. This is an error, certainly as to some refiners. A prominent one in New York recently said that he used from thirty to forty pounds of glucose in each barrel of sugar. "And why should I not?" he inquired. "I make $1,500 per day by using it."

Dr. Wilson remarked that sanitarians had a tendency to go beyond their jurisdiction. If a dealer sells chicory for coffee, his action properly comes under the law. As sanitarians we have only to deal with the disease-producing qualities of the articles sold.

Dr. Wilson does not seem to understand that food is a fuel to the body, and like other fuels, cannot be studied without taking into consideration its economic value.

A valuable paper on vital statistics was read by Dr. Gihon, of the Navy, in his characteristic racy style: "He said that up to the present day those statistics which received special attention relate wholly to marriages, births and deaths. It is of no importance to the sanitarian to know of the number of marriages, and not enough for him to be informed of how many die. Statistics that will be of paramount importance should relate to the diseases prevalent in a community, with the probable causes. It is easy to say what ought to be done, but it is more difficult to say how it should be done. Health pollution should be known above all, and the Legislature must help us out here. He spoke of the attempt of the Bureau of Naval Surgeons to prepare a table that should be of some sanitarian value, and he gave a copious explanation of its structure."

A paper on yellow fever by Dr. Hargis, of Pensacola, Florida, I did not hear.

Dr. Lundy, of Detroit, followed with a discussion of "School hygiene."

"The practice of cramming he condemned in strong terms. The importance of proper ventilation of schools cannot be overestimated. There is, perhaps, not one school in three over the whole State where the ventilation and lighting are perfect. The temperature of school rooms is generally too high. He had frequently visited schools where the temperature was 75 or 80°. Sixty-eight or 70° he deemed sufficient. The desks he also found at fault. They are usually not at all in porportion to the size of their occupants. Each desk should have a top which can be adjusted for either reading or writing. The tendency to the scholastic stoop should be carefully corrected by the teacher. Myopia, or near-sight, he thought, was almost invariably contracted by children while at school on account of a lack of proper light. In some of the Continental schools more than thirty-six per cent. of the pupils have myopic vision, while among the lower class it is practically not to be found.

"Exercise is necessary to health. He spoke of the debilitated appearance of school children, and remarked that if we wish to preserved the highest type of manhood and womanhood in this country, we must devote more time to exercise and less to book knowledge. He favored the appointment of a physical trainer, not necessarily to produce gymnasts, but to show the pupils how to bring into harmonious play all the muscles.

"Certain reforms should take place in our schools. There should be a reduction in the number of studies. The light should enter from the left side; the cramming process should be abolished; ventilation should be upon some approved principle; the temperature should be properly regulated; desks should be of a comfortable pattern; myopic pupils should be provided with spectacles; pupils should be taught to sit erect, and to hold their books at least twelve inches from the eye; and lastly, teach pupils the importance of out-door exercise."

In the evening, Dr. Watson, of New Jersey, and Professor Sargent, of Massachusetts, talked on the importance of physical training, and Dr. Reeves, of West Virginia, read a telling paper upon the "Eminent Domain of Sanitary Science." This paper, like several others of great value, cannot be abstracted, and we must refer the reader to the transactions.

The greater part of the third day sessions was taken up in the discussion of "Sewers and Sewerage." Some interesting and valuable papers were presented.

In the evening, Bishop Thompson gave a forcible popular address in behalf of sanitation, and Dr. Pratt, of Michigan, read a most carefully prepared and valuable paper on "The increase of insanity in the United States."

Saint Louis was chosen as the next place of meeting, and the following officers were elected:

President—A. L. Gihon, United States Navy.
First Vice-President, James E. Reeves, West Verginia.
Second Vice-President, Erastus Brooks, New York.
Secretary, Irving A. Watson, New Hampshire.

Executive Committee, Thomas L. Neal, Ohio; J. D. Gatch, Indiana; H. P. Walcott, Massachusetts; Gustav Devron, Louisiana; H. D. Fraser, South Carolina; C. H. Smart, United States Army.

May the Association grow in influence each year.

Yours, MEDICUS.

OPEN LETTER TO DR. E. O. HERRICK.

MY DEAR DR.:—Dr. Sutton has gone out of his way to publish a most offensive accusation against me, backing it up by a barefaced and utterly inexcusable misquotation from my printed paper.

I have carefully re-read my paper in question, and I am at a loss to imagine how or why its effect upon Dr. Sutton should have been so irritating and demoralizing.

I have induced a good many impartial and calm-minded people to look the matter over and point out to me if they could find the key to the mystery; so far all havec ompletely failed.

Dr. Sutton quotes me as saying, "Since my visit to Dr. Keith," and these words I and my friends have failed to find in anything that I have ever written or printed, in short, Dr. Sutton has here laid himself open to a charge at least as serious as the one he has taken so much trouble to promulgate against me.

The words of my paper are as follows: "Having for some years past devoted a good deal of attention to this subject, I had much pleasure in meeting with Dr. Thomas Keith, of Edinburgh, last year, and in seeing him operate on several cases, and I have to acknowledge my indebtedness to that distinguished surgeon for numerous valuable suggestions, which I have since adopted in my practice, and which I am desirous of communicating for the benefit of others."

I do not claim to have made a special trip to Edinburgh to see Dr. Keith, nor do I, like Dr. Sutton, boast that "*I was long abroad, and had access to everything,*" (the italics are mine). The fact is that I was in Edinburgh, mainly for rest and recuperation, and only incidentally availed myself of the opportunity of seeing Dr. Keith operate and conversing with him on this interesting subject.

Nothing could exceed the kindness and cordiality with which Dr. Keith received me, although I called upon him with no other introduction than my own card. A graduate of the University of Edinburgh, of 1862, I have many old and intimate friends in the profession in Edinburgh, but Dr. Keith did not happen to be of the number as during my student days there, he had no official relations either with the Royal Infirmary or any of the Medical Schools.

My meeting with Dr. Keith was to me an important event in my life, while to him it was only a matter of kindly interest and politeness, such as he is called upon to exhibit to an endless procession of visitors, who come like pilgrims to his shrine from almost every country under the sun.

Admitting for the sake of argument that Dr. Sutton has quoted Dr. Keith's words about me correctly, "He did not see me operate, but spent an hour or two talking in the room here with me." To a man of Dr. Sutton's boasted experience, the possibility of Dr. Keith's memory having failed him for the moment, ought, in my opinion, to have suggested itself and received due weight, in restraining him from rushing into print with such an ill-natured, unnecessary and ungentlemanly accusation against one who had never given him any cause of offence.

When my attention was called to Dr. Sutton's attack upon me through it's reiteration by my near neighbor and avowed personal friend (?) Dr. Leartus Connor, in the first number of his Journal, the Detroit Lancet, issued after my removal to Detroit, I at once wrote to Dr. Keith, and recognizing the possibility just referred to, I took pains to provide against it.

In a very kind letter dated October 30, and received by me November 14, Dr. Keith expresses his regret that such a controversy should have arisen, he recognizes the correctness of the details of my visit, as described in my letter to him, and he adds:

"There are so many visitors and strangers always coming and going, that had I used these words, and if Dr. Sutton says I did, then I believe him, I must at the time have mixed you up in my mind with some other of the American surgeons who are paying such flying visits, and you can easily understand how these get mixed up in one's mind. Very possibly this may be the explanation and the mistake may be mine."

Possibly the mistake may be Dr. Keith's and if so he would be entirely excusable as every man knows who is placed in the position he is, at the same time is it not at least, equally possible that the mistake (?) may be Dr. Sutton's? Does not the undeniable fact of his having utterly misquoted my printed words, justify the suspicion that he has also misquoted the letter, and the spirit of a conversation, which took place on the other side of the Atlantic months or years before?

Dr. Keith's generous willingness to take Dr. Sutton's word for it and shoulder the responsibility of the mistake, does not by any means tend to show that Dr. Sutton is correct in his testimony, and still less does it do anything towards justifying or palliating the insult which Dr. Sutton has so gratuitously and wantonly chosen to put upon me.

In conclusion I would recommend Dr. Sutton to lose no time in writing to Dr. Keith, of whom he speaks so grandiloquently, as "*my friend Dr. Keith*," and offer him a humble apology for having dragged him into a controversy, which so far as Dr. Sutton and his coadjutor, Dr. Connor, are concerned, is destitute of a single fact or feature, calculated to excuse it or give it even an air of common decency. Yours Truly,

DONALD MACLEAN.

72 Lafayette Avenue, Detroit, November 28, 1883.

OPEN LETTER TO DR. LEARTUS CONNOR.

EDITOR *Detroit Lancet: My Dear Doctor*—Since you can *accept* and *publish such* a *certificate* as that of Dr. Sutton's in your last issue, and since Dr. Sutton is able to ignore the distinction between "the only *Professor of Surgery* in Michigan" and "the only *man* in Michigan, who," etc., I repent me of having condescended to have any controversy whatever with either of you. I will indulge the hope that the time may speedily come, when it may be truthfully and joyfully said of each of you, that he is "clothed and in his right mind." When that time comes, (if it ever does) I promise you that I will do my best to forget and forgive the weak and wicked methods of your present madness, and will do what I can to reinstate you in the confidence and respect of people who value truth and honesty and common sense. Poor Dr. Sutton has evidently been too long abroad and had access to *too much*, and "much learning has made him *mad*." I regret that in my own defence, I was compelled to call public attention to his deplorable condition.

All charitable people will join me in hoping that his aberration, like your own, may prove to be but temporary. I remain My dear Doctor,

Your sincere well-wisher, DONALD MACLEAN.

OVARIOTOMY BEFORE MIXED ASSEMBLIES.

The latest issue of the *Medical Age* contains the following communication in reply to one published in the previous issue of that journal.

Dr. Donald Maclean sends us the following which we cheerfully publish: On two occasions, at an interval of eighteen months, my attention has been called to a communication in your journal, which is intended as an adverse criticism of my methods as an ovariotomist.

I have been loath to notice this attack in any way, and for the following sufficient reasons:

First. The fact of its being anonymous, and like anonymous attacks in general, it injured no one but the individual who perpetrated it, and constituted its own best refutation and punishment.

Second. Because the writer by his *nom de plume* claimed to be "a member of the State Medical Society," and it seemed a pity to do or say anything calculated to attract further attention to a communication from such a source, considering, that it was mainly noticeable as an exhibition of ignorance, imbecility and wickedness of heart.

My main inducement to depart now, from my original course toward this timid, but persistent critic, is that an opportunity is thus afforded me, of proffering a remark or two, which may possibly interest some of your *bona fide* scientific readers. Your anonymous correspondent tells us that for eighteen long weary months his mind has been in a chronic state of "surprise" that I, "a countryman of Keith's, should perform an ovariotomy in an amphitheatre crowded with students," etc.

Can it be possible that your correspondent has endured all this mental agony, on my account, for eighteen months and that no "good Samaritan," has mercifully come to his aid and shown him the following from the late lamented J. Marion Sims? (*American Journal of Obstetrics*, April, 1880): "I saw him (Keith) perform two ovariotomies, and each case came to his infirmary on the day previous to operation. Just before operation, he had visited two bad cases of diphtheria. Spencer Wells, requires all spectators at his operations at the Samaritan Hospital, to sign a pledge saying they had not attended any contagious or infectious diseases, or been engaged in dissections or postmortem examinations for a week. Keith believes that antiseptics protect his patients against all danger of infection, and does not exact from spectators any such pledge. The gentleman who gives ether for him is engaged in a large obstetric practice, and Keith never enquires whether he has puerperal fever or septic cases in hand."

If your correspondent will call at my house I will gladly show him a reprint sent me by Dr. Thomas Keith a few days ago, from the *Edinburgh Medical Journal* for September, 1883, in which he may read "Notes of Cases Treated in Ward 19, of the Royal Infirmary, Reported by Skene Keith, M. B., C. M., etc," (Dr. Thomas Keith's son). This report by young Dr. Kieth may fairly be regarded as the latest authorized version of his father's principles and practice. It covers a period extending from January 7, 1880 to May 1883. From it I quote *accurately* (not after the manner of Dr. Sutton), the following: "At first all operations were performed in the large theatre, and the patients suffered in proportion to their feebleness. After being etherized in bed and the india rubber sheet adjusted to the abdomen so that merely the line of incision was exposed, the patient was secured to a long narrow board, carefully covered with blankets, with a hot water bag to the feet and thus *carried down stairs along a very draughty corridor into a room heated at the close of the operation to sometimes upwards of 70° Fahrenheit, and crowded with five or six hundred students, more than half of whom came probably from the dissecting room.*" (The italics are mine).

From this same report it appears that after a time Dr. Keith abandoned the practice of transporting patients to the large theatre, and that he also adopted precautions to prevent his patients from septic contagion. This change in practice he tells us was based upon the theory that the carbolic spray, to the protective influence of which he formerly trusted, was insufficient, and in itself dangerous. *He abandoned the amphitheatre because he had to abandon the carbolic spray.* My own belief, which I state with all due modesty and humility for what it is worth, is that the long stairs, the draughty corridor and the carbolic spray were much more to blame for the few disasters Dr. Keith met with, than the large theatre and the crowd of students fresh from the dissecting room.

Your correspondent must surely have been morbidly anxious for some pretext to attack me, when he ventures to avail himself of one, which so plainly lays him open to a charge of inexcusable ignorance, or still more inexcusable bad faith.

As a matter of fact, I have within a comparatively brief period, performed three ovariotomies on most unfavorable cases, in the amphitheatre at Ann Arbor, and everyone of the patients made a rapid and complete recovery. Within the last few weeks, I found myself compelled to perform a double ovariotomy in this city, in surroundings, if possible, even less antiseptic than the hospital amphitheatre at Ann Arbor, and still, the patient, a wife and mother aged twenty-two years, left for her home on the tenth day after the operation, and is now in perfect health.

The conviction has for some time been growing in my mind that the peritoneum is especially suited to resist septic influences. provided its vitality is not lowered or destroyed by rude handling during the operation, provided that *all* effusions and foreign matters, are removed before the wound is closed, and provided that all subsequent effusions are removed by efficient drainage and cleansing.

I can assure your correspondent that I have never lost a patient operated upon before the class at Ann Arbor from septic causes. May I now ask him how many ovariotomies he has ever performed, and where he has performed them, and whether he has ever done two in one day? (I have not) and lastly where are those patients now? These are *grave* questions, especially the last one. May I ask him whether his *real* ground for complaint against me is that I have failed to attain to his standard of success, or is it that I have in all respects exceeded it? I have reason to believe that the latter is the true explanation! May I say to him through your columns that the vulgar slang in which he animadverts upon my temperament and manners, besides implying a falsehood, is very unworthy of one who signs himself, "a member of the State Medical Society," and comes with especially bad grace from one who informs us that he himself has for eighteen long months carried a peculiarly vulnerable little "chip" on his shoulder, without any one condescending to knock it off for him, until at last in sheer pity for his importunity I have now tried to relieve him of it.

Finally: I desire to propound the following problem for him to solve:

I say that I saw Dr. Thomas Keith perform ovariotomy, and Dr. Keith corroborates my statement. Query: How many Suttons, Connors, and anonymous whimperers will it take to controvert that fact and to convince intelligent and fair-minded people that any man could be such an idiot as to make a claim of that nature, on any but the *immovable foundation of the absolute truth?*

TRANSLATIONS.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.

BY RALPH D'ARY M. D., ROMEO, MICHIGAN.

LUNG SURGERY. CONTINUED FROM PAGE 510.

A little while before the last mentioned case Smith had published a case from his practice in which pulmonary gangrene had been treated surgically (the *Lancet*, January 17, 1880). A sexagenarian man had right pneumonia, which terminated in gangrene. A large cavern formed in the middle lobe; the patient expectorated an enormous quantity of uncommonly fetid grayish fluid and fell into a collapsed state. Smith inserted a four inch aspirator needle into the lung, in the region of the lower angle of the scapula. There was no fluid withdrawn, but so large a quantity of fetid gas made its escape that it caused the light of a candle to oscillate with the patient's respiration. Having thus made sure of the existence of a cavity, Smith introduced a knife between the ribs, enlarged the wound, inserted a strong rubber tube and through it injected a little of a solution of carbolic acid. There followed an attack of cough with expectoration of liquid fetid pus. The tube was left in site. During the first week of the operation there was marked relief, the sputa decreased, the fetor was less offensive at the time of dressing the wound, the general condition was improved, the appetite returned, and breathing was easier. But, although the wound was daily washed out by means of a syphon, the discharge from the wound continued to be fetid. From the eighth day after the operation the patient began to get worse, and on the twelfth day he died "from asthenia." No autopsy.

Mosler has operated on a case of echinococcus of the lung, by repeatedly introducing a medium sized trocar in various directions into the parenchyma of the lung. This was done in the hope of penetrating the cyst and evacuating its contents. The immediate result of the operation was a negative one, but the patient recovered from the operation and from the disease as well. Mosler confesses, however, that it was impossible to decide positively whether it really was a case of pulmonary echinococcus.

Bull has succeeded in completely curing a case of gangrene of the upper lobe of the left lung by means of an incision and drainage.

W. Koch published last year the following two very interesting cases:

(1) Interstitial pneumonia and cavities in right lower lobe; catarrh of upper right lobe. Expectoration of about four hundred cubic centimetres of sputa having all the characteristics indicative of gangrene. Inhalation treatment is ineffective. The sixth rib was resected and the thermocautery was carefully insinuated into the substance of the lower left lobe, in the direction towards the mediastinum. It entered a cavern of the size of a child's fist, in which could be *seen* the apertures of several bronchi. The cavity was situated at about three fingers' breadth from the surface of the lung. The cavity being so large, several square inches of its walls, that is, of lung parenchyma, must have been destroyed by the cauterization, but the reaction after the operation was quite insignificant. The daily quantity of sputa sank to one quarter, that is, from four hundred to one hundred and twenty cubic centimeters. After four days another operation was undertaken with a view to finding and opening another supposed cavity which still continued to discharge its pus in the expectorations. For this purposes the eighth rib was resected and the thermocautery was introduced into the lower lobe to a depth of fourteen centimeters in a backward and downward direction, forming a funnel-shaped fistula in the lung. Several small broncho-ectases were found in the way of the thermocautery and were obliterated. Two hypodermic syringes were pushed farther into the lung in the direction towards the spine from the end of the fistula made by the cautery, and a quantity of liquid fetid pus was drawn up by them, but yet no cavity was found. Beyond the fistula there must, therefore, have been either a pleuritic exudation or a gangrenous focus filled with pus. Ten days later another incision was made between the eighth and ninth ribs, downward and inward from the lower scapular angle, and here a cavity was really found. A solution of the thymol was injected and immediately found its way into the bronchi and was expectorated with some gangrenous sputa. After this third operation the sputa became much lessened in quantity, but did not altogether disappear. The patient's condition was very sat-

isfactory. Of his farther fate Koch unfortunately says nothing.

(2) A very much exhausted woman suffers from severe dyspnœa and expectorates from eight hundred to one thousand cubic centimeters of fluid, fetid sputa. On the right side, between the fifth and seventh ribs, and below the angle of the scapula there is dullness on percussion, and amphoric breathing with metallic resonance. The aspirator needle was thrust in here, and fetid matter was extracted exactly corresponding with the patient's sputa. Then four inches of the sixth rib was resected and the thermocautery was inserted in the same direction as the needle had been, that is, in a line from the anterior axillary line to the outer wall of the right auricle. About two inches below the surface of the lung it entered a cavern the size of the fist, whose floor was partly formed by the diaphragm. The cavern was divided by numerous partitions which were destroyed with the thermocautery. The aspirator needle, being inserted in various directions through the posterior wall of the cavity, discovered yet another cavity at some distance from the first one. The latter cavity was now laid open with the thermocaustic knife. It was about the size of a child's head (?) and from it was taken about one thousand cubic centimeters of putrid fluid. The opening was enlarged sufficiently to admit three large rubber drainage tubes. The cavity was washed out with thymol and acetate of alumnia solutions. After the operation the expectoration ceased immediately and completely, and the cavities gradually began to fill with healthy granulation; nevertheless the patient collapsed and died on the seventh day. The autopsy proved that death was caused not so much by the consequences of the operation as by phlegmonous inflammation of the porta hepatis, and by lobular broncho-pneumonia in the lower lobe of the left lung, around a foreign body which had become seated here ("swallowed the wrong way?"), and from chronic septicæmia, which had induced fatty and parenchymatous degeneration of the internal organs, previous to the operation.

From his experience with these two cases W. Koch formulates the following indications for surgical treatment of the lungs:

In that variety of chronic pulmonary gangrene which causes the formation of sacculated broncho-ectases, and is accompanied with expectoration of a great quantity of purulent fluid, he positively recommends the opening of the cavities. If there is but one cavity, it is sufficient to open it by making a fistulous passage of proper size, leading into the cavity. This should be done with the thermocautery, by carrying it right through the parenchyma of the lung. The cavity should be drained and irrigated for about two days. If the cavity is very superficial, it is sufficient to introduce a large trocar and then to irrigate it. If there exist many communicating broncho-ectatic sacs, they should be converted into one larger cavity by means of the thermocautery.

In case of acute pulmonary gangrene, such as follows gunshot wounds, and where the gangrene tissue has not yet separated and is surrounded with œdematous hepatized lung tissue, it is necessary not only to open the gangrenous focus, but to char the dead tissue with the thermocautery.

The burning of a funnel-shaped channel through the lungs is indicated also where a foreign body has penetrated into a bronchus and cannot be removed in the natural way, for this body would cause bronchial blenorrhea and infection of the surrounding parts.

He also recommends thermocaustic or galvanocaustic destructiôn of certain parts of the lung tissue in septic bronchitis (without broncho-ectases) and in rare cases of completely localized pulmonary tuberculosis. In those cases of bronchitis it would also be well to make injections into the parenchyma of the lung of disinfectants and remedies limiting the morbid secretion.

In all surgical operations on the lungs care should be had to preserve as much as possible of the breathing surface.

Previous to the operations exploratory punctures with apiration should be made. The needle should be boldly thrust into the lung, in various directions, to a depth of from seven to fifteen centimeters, until pus or purulent secretion is aspirated. These punctures are not dangerous. Hiller has made them hundreds of times without the least injury to the patients.

In conclusion I will relate the following two cases from the clinic of Professor Gerhardt, of Wurzburg, as presenting clinical exemplifications of Koch's experiments on animals in the way of injections into the lung tissue.

(1) The patient is twenty-three. In the seventeenth year he had had pneumonia, from which he never fully rallied. He coughed and expectorated a great deal, especially in the morning, or at any time when changing from the horizontal to the vertical position. These symptoms were gradually getting worse, the sputa assuming a septic character. His face was pale and cyanotic, the lower limbs were œdematous, the breathing hurried. Percussion and auscultation were normal anteriorly; but posteriorly and on the left side, from the middle of the scapula downward there was bronchial respiration, strong mucous rales and a characteristic splashing on shaking the patient's body. When the patient was laid on the left side, or made to assume the position *à la vache*, he was immediately seized with paroxysmal cough, and ejected a large quantity of fetid fluid through the mouth and nose. The liver and spleen were somewhat enlarged. The urine contained small quantities of albumen, pus corpuscles and tubular casts. His temperature was 38.2°; his pulse, 128. A three weeks' treatment with inhal-

ations of turpentine and chinolin produced no improvement. The sputa continued fetid and increased in quantity to eight hundred cubic centimeters. Operative treatment was now decided upon.

A long hollow needle, attached to a hypodermic syringe, was inserted into the lung below the angle of the scapula, and 2.0 of a three per cent. solution of carbolic acid was injected. The pain was very slight, and there was no cough. After the injection the sputa completely lost their fetor and their daily quantity sank to four hundred cubic centimeters. The next morning a similar injection was made. This one was followed by rather a hard cough with expectoration of a small quantity of odorless (and not bloody) sputa. The quantity expectorated sank to three hundred cubic centimeters per day, and the subjective condition of the patient improved considerably. On the third day after the second injection, the sputa again became offensive. Therefore a third injection was made, and was again followed by cough. The fetor immediately disappeared, the quantity of sputa diminished to two hundred cubic centimeters per day. This lasted several days. Then again an increase in quantity and fetor. The patient declined further injections, therefore the following mixture for inhalation was prescribed.

℞. Ol eucalypti	2.0
Aquæ destillat	2000 0
Spir. vini	30.0

This again removed the fetor, but its quantity varied between four hundred and six hundred cubic centimeters per day. The patient was taken with diphtheritic angina faucium and consequently was unable to use the inhalations for several days. The sputa became very fetid and their quantity rose to seven hundred cubic centimeters per day.

Then another injection of 1.0 of a three per cent. solution of carbolic acid was again thrown into the broncho-ectatic place, followed by cough and expectoration without a trace of blood. Toward the evening the sputa again lost their fetor and from that time forward during two months, (when the patient left the clinic) the inhalations alone were sufficient to prevent septic decomposition of the sputa. In quantity it fell again to four hundred cubic centimeters. The patient finally died at his distant home from amyloid degeneration of the liver, spleen, and kidneys. This case shows that injections are a safe and valuable means of treating broncho-ectasis.

(2) The patient, now forty-one, in his twenty-fourth year had had an apoplectic attack, which for a long time left paralytic symptoms in his left extremities. For a year past he had suffered with cough, pain in the chest, dyspnœa, and abundant expectoration, which at last assumed a septic character. Then he entered the hospital. His lower extremities were strongly œdematous. The veins of the neck and anterior aspect of the

thorax were enlarged; the bulb of the right jugular vein pulsated; the breathing was hurried. Below the middle of the scapula there was a muffled tympanitic percussion sound, bronchial respiration, rales, and the characteristic splashing on shaking the patient. On the left side were the same symptoms, but in a lesser degree. There was a systolic murmur over the tricuspid valve. The liver was slightly enlarged, and there was slight ascites. The pulse was small, weak and irregular. The sputa were purulent, dirty yellowish, and very fetid. The urine contained albumen; the temperature was 38.0°. At 11 A. M. 2.0 of a three per cent. solution of carbolic acid were injected through the eighth intercostal space, in the linea scapularis, into the right lower lobe. There was neither pain nor cough. Fifteen minutes after the injection the pulse fell from 108 to 92. The evening temperature sank to 37.3° and the next morning to 36.5°. The fetor and quantity of the sputa diminished. Three more injections were made at various intervals and with like favorable results. The patient, however, rapidly lost strength and soon died. On autopsy a large cyst was found in the left corpus striatum, and a descending degenerative process in the right crus cerebri and the right half of the pons Varolii; the cardiac valves of the heart were affected; the liver and kidneys were passively congested. In the lungs there were broncho-ectatic caverns. No traces of the injections could be found, except the last one, which had been made two days before death, and which could be traced by hemorrhagic infiltration along its passage.

We conclude our review. We have presented to the reader, not all the clinical cases recorded, but all those that represent the various phases of the treatment as hitherto observed clinically, and we leave him to draw his own conclusions, but we think he will agree with us that lung surgery not only will have a future, but even now has become an established fact.—Translated in condensed form from an article by N. Y. in *Medical Vestnik.*

NEW TREATMENT OF TRICHIASIS.

Dr. Taniamshef describes the following simple manner of treating trichiasis and distichiasis, which he has found to be very successful. The hornplate having been placed under the lid, the latter is divided into two layers, by means of a longitudinal incision of four to six millimetres in depth, running parallel with the outlets of the Meibornian ducts. The upper layer consists of the skin, connective tissue, hairbulbs, and muscles, the under layer consists of cartilage and conjunctivæ. After the bleeding is checked the wound is cleared of the coagula, and a sharp-pointed pencil of lunar caustic is carried several times over the raw surface. The consequence is that a crust is formed over the cauterized wound. This crust is thrown off in about forty eight hours and the wound granulates. In most cases the abnormal direction of the lashes is promptly and completely corrected. A partial trichiasis was observed to remain in those cases only where the incision had not been made very evenly throughout. But a secondary operation easily corrected this. As he has used this method only for five months, (although a great many times). Dr. T. is as yet not able to say whether relapses can occur or not. Meanwhile we should recommend this operation for its uncommon simplicity.—*Vratsh.*

GLONOIN.

Dr. Y. I. Trussevitsh, of Saint Petersburgh, sends to THE PHYSICIAN AND SURGEON a copy of an article of his on the treatment of angina pectoris with glonoin, with the request to give it a notice in our magazine. Glonoin in the treatment of spasmodic neuralgic affections, and especially those of the head, and in angina pectoris, though apparently as yet not sufficiently appreciated on the European Continent, is not new either with us or in England. In the latter country it has been extensively used in the hospitals; *here* it has long been recognized as a patent palliative in the above affections, when dependent on organic changes of the arteries, the heart, or nerve tissue, either by cutting short an actual attack, or warding it off. In simply functional neuroses it often is not only palliative but curative. Dr. T's observations coincide with the general experience.

BOOK REVIEWS.

SURGICAL APPLIED ANATOMY. **By Frederick Treves, F. R. C. S., Assistant Surgeon to and Senior Demonstrator of Anatomy at the London Hospital; Examiner in Anatomy at the University of Aberdeen; Wilson Professor of Pathology, Royal College of Surgeons of England, 1881. Illustrated with 61 engravings. Cloth; pages, 531, 12 mo. Philadelphia: Henry C. Lea's Son & Co. For sale by George Moore, Ann Arbor.**

ELEMENTS OF SURGICAL PATHOLOGY. **By Augustus J. Pepper, M. S., M. B., F. R. C. S., Fellow of University College, London; Surgeon to Saint Mary's Hospital; and Teacher of Practical and Operative Surgery at the Medical School. Illustrated with 81 engravings. Cloth; pages, 503. Philadelphia: Henry C. Lea's Son & Co., For sale by George Moore, Ann Arbor.**

Cui Bono? These little books are well written and consist of condensed statements from standard authors. But why were they written? They contain nothing new. There can be no crying demand for such works, except from the student who is *boneing up* for an examination. Would it not be better for the student to go to the original sources and drink at the fountain head. Is there not too great a tendency to spend time in the construction of these royal roads to learning. Mr. Pepper has written a short chapter upon surgical fever, for instance, in a very pleasing style. But is there not danger that the student, after reading it, will conclude that he knows all worth knowing on this point? Would it not be better for the teacher to refer his student to the writings of Billroth, Burdon—Sanderson and Hillier? Are these condensed and abbreviated statements the best means of making learned men out of the medical students? These are questions which arise in our mind after examining these books and many others of their kind. If the books could be used with the larger works the harm which they do, would be neutralized; but still the old question, what good? To the student of anatomy we would say buy Quain's volumes, rather than all the pocket texts on the subject.

EPITOME OF SKIN DISEASES, WITH FORMULÆ, FOR STUDENTS AND PRACTITIONERS. By the late Tilbury Fox, M. D., F. R., C. R., and T. Colcott Fox, M. B., M. R. C. R. Third American edition, revised and with additions. By T. Colcott Fox, B. A., M. B. Cloth; pages, 240. Philadelphia: Henry C. Lea's Son & Co., 1883. For sale by Sheehan & Co., Ann Arbor.

Of course, this little volume should not be allowed to supplant the larger and more thorough works. It should be used as an aid in studying the larger volumes on this subject. Used in this way, its value will be great. It contains many practical points that may prove of importance to all, and especially to the younger members of the profession. Methods of examination and diagnosis are given quite fully. The rule to examine all the diseased places on the body before making a diagnosis is well worthy of general adoption. Again the fact that the conditions of life of the patient—sex, age, color, build, nervous temperament should be taken into consideration, must not be overlooked. The little volume evidently has its place of usefulness on the study table of the physician.

PRINCIPLES OF THEORETICAL CHEMISTRY, WITH SPECIAL REFERENCE TO THE CONSTITUTION OF CHEMICAL COMPOUNDS. By Ira Remsen, Professor of Chemistry in the Johns Hopkins University. Second edition, thoroughly revised and enlarged. Cloth; pages, 242. Philadelphia: Henry C. Lea's Son & Co., 1883. For Sale by Geo. Moore, Ann Arbor.

This is probably the best small manual of theoretical chemistry that we have. The questions of atomic weights, equivalence, etc., are made perfectly clear. We would heartily recommend it to any student who desires to acquaint himself with the subject. We notice a few typographical errors which should be corrected. The word *hydrogen* should be substituted for oxygen in the phrase, "nor of nitrogen and oxygen in ammonia," on page 19, 15.74, on page 61 should read 13.74.

In the matter, we can find nothing to criticise. Every point is explained with perfect satisfaction, so that the merest tyro may understand

A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS. By Roberts Bartholow, M. A., M. D., L. L. D., Professor of Materia Medica and Therapeutics in the Jefferson Medical College of Philadelphia, etc. Fifth edition revised and enlarged. Cloth; pages, 738. New York: D. Appleton & Co., 1884. For Sale by George Ossius & Co., Ann Arbor.

This work is well and favorably known to the profession. The present edition has been revised and made to correspond to the revised Pharmacopœia. About one hundred pages have been added, and additional space has been secured by omission of some of the references. We regret that any such omission has been made. It is so interesting and ofttimes so important to one to hunt up and study the original papers. Bartholow is not a skeptic in medicine, and on account of his earnestness, enthuses the student. Much attention is given to the physiological action of remedies. To those acquainted with the former editions no words of recommendation will be necessary. To others and to students we most heartily give the advice to procure and study the volume.

With the works of Bartholow and Wood on therapeutics, the profession in this country has just reason to be proud.

THE PATHOLOGY AND TREATMENT OF VENEREAL DISEASES. By Freeman J. Bumstead, M. D., L. L D, Late Professor of Venereal Diseases in the College of Physicians and Surgeons, etc., and Robert W. Taylor, A. M., M. D., Professor of Venereal Diseases in the University of Vermont, etc Fifth edition, revised and enlarged with many additions by Dr. Taylor, with 139 wood cuts and 13 chromo-lithographic figures. Sheep.

SELECTED ABSTRACTS.

ON SOME KINDS OF ALBUMINOUS AND PURULENT URINE IN CHILDREN.

The urine of children is sometimes found to be albuminous, purulent, or bloody, when there are no other reasons for suspecting disease of the urinary organs. Bloody urine seldom escapes notice. But purulent urine may be easily overlooked, especially in the case of babies who pass their urine into a napkin. And albuminous urine cannot be distinguished by the eye from healthy urine; so that it is a good rule to follow, to examine the urine of all children, even of the youngest, who are suffering from serious or obscure disease. And hereby the the nature of an illness, which is otherwise inexplicable, sometimes becomes quite clear.

I will speak, first, of purulent urine; and, next, of spontaneous nephritis.

I. Purulent Urine.—At the outset, let me exclude all cases in which the urine of little girls is rendered purulent by mixture with discharges from the vagina or pudendum.

Uurine which is purulent within the bladder, becomes so in consequence of cystitis, pyelitis, or destructive ulceration of the kidney. I cannot recall an instance of an abscess having opened into the urinary passages of a child. Again, purulent urine is either a temporary or a chronic condition; and it is to the temporary form of the disease that I wish to call especial attention.

(1) *Urine Purulent for a Short Time Only.*—In cases of this kind, it is hard to say whether the mucous membrane of the bladder, or of the pelvis of the kidney, or of the whole urinary tract, is inflamed. Some children suffer from the symptoms of cystitis; that is to say, the urine is passed often, in small quantities, and with pain; but other children have no local symptoms of any kind. And cystitis, even when present, may be only a part of more extensive disease.

I will narrate two instances of this temporary purulent urine; one of which possesses the unusual interest of having been followed by a *postmortem* examination.

The little daughter of a well-known surgeon, a child aged nine months, brought up by hand, suddenly became very feverish and ailing. Asked to see her, I could discover no cause for these symptoms, until, after a few days had passed, the nurse noticed that the napkins were stained in an unusual manner. Some of the urine being saved, it was found to contain pus, and nothing unnatural besides pus. Micturition was painless, and not more frequent than usual. Her urine remained purulent for several weeks, and then she completely recovered; and at this moment, when she is four years old, she is quite well; her urine is natural, and always has been so since that illness.

A girl, aged two years and a half, was admitted into the Hospital for Sick Children on account of an illness which began on July 4, 1878, with fever and the signs of cystitis; that is to say she suffered pain when she passed urine, which she did very frequently, so that she often wetted the bed. On July 15, the day of admission, her condition was as follows: She looked very ill, and was febrile, with a temperature of 104°. She cried when she passed urine. The urine was pale yellow, alkaline and slightly albuminous. It yielded a flocculent sediment, which constituted about a quarter of the whole; and which consisted of mucus and of corpuscles. The corpuscles were faintly granular, larger than ordinary pus-globules, and looked as if swollen with water. Each corpuscle contained a large and distinct nucleus; some corpuscles had two neuclei. There were no casts of renal tubuli. She was sounded but no stone was felt. There were no other signs of definite disease. The fever continued until August 10, and the temperature not seldom rose to 104°, sometimes nearly to 105°. After August 10, it was natural for the most part, but, on three occasions, it rose for a day or two without obvious cause. On August 5, the urine was still purulent; but there is no note after this date until September 2, when the urine was free from pus and albumen. On September 23, the urine was almost clear, and threw down hardly any sediment. On October 3, she went out a very different child from what she was on admission, being quite well, fat and firm; the urine was natural.

Eighteen months afterwards, she was attending for bronchitis, and died in the out-patient room. Dr. Abercrombie made a *postmortem* examination, and I extract these details from his report. There were the signs of bronchitis and congestion of the lungs. A small cheesy nodule, about the size of a pea lay in the lower lobe of the left lung. The tracheal glands were large and cheesy. The kidneys and ureters were natural. The bladder was dilated, the walls thin, the mucous membrane natural. All other parts were natural.

Concerning the treatment of these cases, a milk and farinaceous diet is to be advised. The drugs which I have found to be useful are two; namely, benzoate of ammonia, and pareira brava.

(2) *Chronic Purulent Urine.*—When the urine remains purulent for more than a few weeks, the question of tubercular disease or of stone arises. How long a simple cystitis or pyelitis may last, I cannot say.

(*a*) The best account of tubercular disease of the urinary organs is given by Mr. Thomas Smith in the eighth volume of "Saint Bartholomew's Hospital Reports." There is a good description of the morbid anatomy in Matthew Baillie's "Morbid Anatomy," published at the end of the last century. (See "Works," by Wadrop, 1825, Volume II, pages 244, 262.) In the eighth volume of the "Clinical Society's Transactions," Mr. Humby has narrated an unusual case of perforation of the bladder by a tubercular ulcer. I agree with Mr. Smith that the disease commonly begins in the kidney. I once saw, at a *postmortem* examination, most extensive tubercular destruction of one kidney; and yet, during life, no albumen, pus, or blood had been found in the urine, although it had been examined many times. The kidney had been quite shut off from the urinary passages.

(*b*) Stone in the kidney of a child sometimes seems to be latent, and to afford no signs besides purulent urine. In cases of this kind, I do not see how a diagnosis can be made. In other cases of stone in the kidney, the diagnosis becomes possible; when there are symptoms more or less like those of renal colic; when there are symptoms of stone in the bladder, and yet no stone can be discovered there; or when the kidney can be felt by deep pressure.

II. SPONTANEOUS NEPHRITIS.—Acute nephritis, not secondary to any discoverable disease, and not due to the operation of any known poison, is common enough in adults; and I believe that primary spontaneous nephritis is far from being uncommon in children. The question of latent scarlet fever always rises. But when acute nephritis occurs in a child who has never shown any signs of scarlet fever, who has not (so far as can be made out) been exposed to scarlet fever, and whose brothers and sisters, living in the same house, have not shown any signs of scarlet fever, I think that the burden of proof lies upon him who affirms that such nephritis must needs be scarlatinal.

This acute spontaneous nephritis is sometimes wholly latent. The chill is ill, but affords no symptoms which draw attention to the kidneys. It is only when the urine is asked for and examined, as a matter of course, that the nature of the disease becomes apparent. The onset is sometimes attended by a high degree of fever, but this is not always so. Indeed, the temperature is sometimes never raised at all.

There is often no dropsy from beginning to end of the disease. On the other hand, the dropsy is sometimes great, and even causes death by hydrothorax and œdema of the lungs.

Vomiting may attend the onset of the nephritis. When the vomiting is frequently repeated, the case becomes serious. Sometimes the child is dangerously exhausted from want of food.

I have known a little patient, suffering in this manner, whose life seemed to be saved by nutritious enemata. Again, incessant vomiting is dangerous when it causes much falling off in the quantity of urine secreted. Occasionally the vomiting is attended by diarrhœa.

In several adults, I have known an ordinary acute sore throat to be attended by profuse renal hæmaturia. The whole disease is short, lasting not more than a week or ten days. One of my patients suffered in this way twice. The same combination of disorders may happen in a child; I will narrate an instance. A boy, four years old, complained of his neck; his temperature was 102°; the next day he seemed well. On the morning of the third day he seemed well, and his urine was natural to the naked eye. In the evening of the same day his neck swelled again; his temperature was 101°, and his urine was highly bloody. On the fourth day his temperature was 103°; the left side of the neck, both in front of and behind the sterno-mastoid muscle, was much swollen; one large gland could be felt; the swelling was very tender, and he could not open his mouth, so that the state of his fauces remained unknown. The urine was scanty and very bloody; by the microscope were seen numerous blood-discs, leucocytes, and casts, large and small, more or less corpuscular; there was no dropsy. On the fifth day he was better; temperature 101°; the swelling of the neck was less; the tonsils were much swollen, and on the left was a small white excoriation. The urine was still very scanty, but hardly bloody, yellow-green in color, very albuminous, turbid, containing casts, leucocytes, and a few red discs. For the next few days the character of the urine remained the same; the swelling of the neck and fauces gradually became less. On the tenth day, the right side of his neck was somewhat swollen. On the eleventh day, he was altogether better, the urine rather more abundant, and much less albuminous. On the twelfth day, the urine was much more abundant, and very slightly albuminous. In a day or two afterwards he was quite well. At the present time, more than six years afterwards, he remains in good health.

More or less drowsiness sometimes attends acute nephritis in children, whether they be febrile or not. In some cases the drowsiness amounts to coma, as in the following instance. A girl, aged four years, became unwell on March 24, and her urine was found to contain many pyoid corpuscles, no casts, and not much albumen. On March 27, she became febrile and drowsy. The fever continued, and the drowsiness increased. There were no vomiting and no convulsions; the pulse was regular; the pupils were natural; there were no physical signs of disease in the chest or belly. On March 30, I saw her for the first time with Dr. R. M. Miller, of Norwood, whose patient she was, the question being whether her drowsiness was due to disease of the brain or of the kidneys. I will now quote from a report which Dr. Miller kindly sent me. "On April 2, there was a most abundant discharge of kidney-casts with epithelium. She became more and more gravely unconscious and ill, and, on April 3, her pulse was 180, and temperature 106.8°; dry brown tongue, sordes; and she was quite unconscious. About three days later there was a little improvement, her temperature came down, and she took food better. On April 9, there was a decided change for the better. She was not yet conscious, but when spoken to she moved her eyes from side to side. Up to the twenty-seventh day of illness, she never spoke a word. The pyoid corpuscles were absent from the urine for the first time on the twentieth day. After the fourth week she made a rapid convalescence." I may say that I have seen several other cases like this, but in none was the unconsciousness so deep.

Dr. Campbell Pope (London) a few weeks ago, had under observation an infant, just under twelve months old, whose illness commenced with vomiting; and this having continued some days, drowsiness came on, and cerebral disease was suspected. On examination, however, of the urine, which had been difficult to obtain, it was found to be loaded with albumen and casts, and in a few days became profusely mixed with blood. There was no renal colic or other evidence of stone, and the urine remained albuminous in gradually decreasing quantity for about six weeks, when the child became well and the urine normal. There was no history of scarlatina, or any case of that disease in the house or neighborhood, as far as could be ascertained, within a few weeks before or after the occurrence of this case.

Mr. R. W. Parker (London) was glad to have heard Dr. Gee refer to the probable presence of stone in the kidney, without any other signs than pus in the urine. This absence of what in adults was considered one of the most characteristic signs—namely, renal pain—had frequently struck him. He briefly referred to the case of a girl who had been subject to periodical attacks of hæmaturia and pyuria. She had no renal colic, and even during the height of an attack only complained of a little uneasiness about her umbilicus. Thus it was impossible to say in which kidney the stone was present, although he had little doubt that stone was the cause of the mischief.

Dr. Ashby (Manchester) was glad Dr. Gee had called attention to the importance of examining the urine in infants, a proceeding often neglected on account of the difficulty of saving it. The urine of infants was not unfrequently albuminous, both in general conditions of the body and in disease of the kidney, and doubtless also occasionally purulent. Dr. Ashby also agreed with Dr. Gee in his belief that acute nephritis, other than scarlatinal, occurred frequently in children. Recently, he had seen three such fatal cases; and it would be important to examine such kidneys microscopically, to see if such were cases of glomerulo-nephritis, as it had been stated by Friedländer and others that this condition was confined to scarlatina.—*British Medical Journal.*

A CASE OF POISONING BY SULPHATE OF IRON.*

S. B., aged forty, born in Ireland, single, was committed to the prison for larceny in June, 1882. She was of medium size, and thin in flesh; her circulation was very active, and her general health was good, but her mind was greatly disturbed. She did not eat or sleep well after her commitment. During the third week she complained of diarrhœa.

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* Read before the New England Hospital Medical Society, June 22, 1883.

July 24: She was admitted to the hospital for diarrhœa, accompanied by nausea and vomiting, with severe pain in the abdomen. As bowel affections of various kinds were prevalent at the time in the prison, no especial importance was, at first, attached to this case. Examination of the discharges, on the day following admission, revealed the fact that they emitted not the slightest fæcal odor; they were greenish in color, and of watery consistence. The breath was cold; the tongue slightly furred, pale and cool; the mouth was dry, and imparted a peculiar, glassy feeling to the touch. The temperature under the tongue was 95° Fahrenheit, in the vagina 99°; the pulse was weak and irregular, 100 to 108. There was extreme nausea, and efforts at vomiting were frequent; there was also severe pain in the abdomen, culminating in the rectum, with tenderness on pressure, most marked over the sigmoid flexure of the colon.

Poisoning (intentional) by sulphate of iron was suspected, but was stoutly denied by the patient. Subnitrate of bismuth and tincture of opium were injected into the rectum with a little warm water; a hypodermic injection of sulphate of morphine was made over the point of greatest pain; hot flaxseed poultices were applied over the bowels. Sixteen grams of castor-oil, with six of laudanum, had been given before the patient was removed to the hospital.

The history of the four days next following presents but little variation. Nothing was retained by the stomach except at one time a little brandy and water.

July 30: The pulse was feeble and irregular, 104 to 108; the temperature under the tongue, 96.5°. The tongue was still cool, and now thickly furred. The mouth still presented a dry, cold, glassy feel. Pain and tenderness in the abdomen was undiminished. The hypogastrium was hard and inelastic on palpation; there was no tympanitis. One flaky, dark brown discharge took place, very slightly fæcal in odor.

July 31: There was a small watery stool containing black specks and flakes; odor as before. There was a discharge of bright red blood from the uterus. The last menstrual period occurred eleven days previously; menstruation had always been regular.

August 1: She slept a little for the first time since admission. Pulse 110, weak and running. Patient perspired freely; vomited frequently a strongly acid, colorless fluid. There was retention of urine. The skin was bathed in hot water, to which a little dilute sulphuric acid had been added. A catheter was used, and one hundred and fifty cubic centimeters of urine were drawn. Its specific gravity was 1.025, its reaction was slightly alkaline, and it was heavily loaded with phosphates.

August 2: The abdomen was greatly distended below the umbilicus; the epigastrium was retracted. There was a dry, brown stripe in the central line of the tongue; pulse 96; temperature normal. Ice-bags were applied to the abdomen, with some relief to the pain.

August 3: She complained of *pain in the stomach* for the first time. No medicine nor food was retained upon the stomach. The urine was scanty and high colored.

3:15 P. M.: A copious discharge from the bowels occurred without the knowledge or control of the patient. It was fluid, containing floating specks of semi-solid matter fæcal in odor; reaction neutral. The patient was greatly excited. A nourishing enema was given and retained, pressure being made upon the anus for one hour.

August 6: The patient slept a little during the night. The left side of hypogastrium was more distended than the right, was painful, tender and indurated, and dull on percussion. All substances were immediately rejected by the stomach.

August 7: The tongue was brown and dry in the center, and thickly furred. The patient seemed more ill than upon any previous day. She had no control over the discharges from the bowels or bladder. She passed large liquid stools, containing a greenish-black, finely divided, flaky substance.

August 8: The pulse was weak, 120; the temperature, 97.4°. The abdomen was less distended; there were great pain and soreness in the region of the stomach. The surface of the body was very cool to the touch.

August 12: The odor of the breath was strongly fæcal.

At 7:45 P. M. the patient vomited a dark, greenish-black fluid, containing black specks almost identical in odor and appearance with those in the discharge from the bowels. Frequent vomiting (fæcal), and involuntary movements from the bowels occurred till 10 P. M. Copious draughts of hot water containing a small amount of bicarbonate of sodium were given; also an enema of oil of turpentine, one gram, warm water, sixty grams. (The latter returned accompanied by much flatus). The patient was weak and nauseated during the night. She retained a little brandy and white of egg given by the stomach; also a portion of the nourishing enemata administered every six hours was retained.

August 13: She acknowledged having taken sulphate of iron. She said she was sent to the bath-room on July 20, when she took a handful of the copperas used for disinfecting purposes, and chewed and swallowed it as rapidly as possible; she did not know how much she ate—probably two ounces. She soon became partially blind, deaf and dizzy, with a sensation of numbness all over her body; her legs seemed half-paralyzed, and she could walk with difficulty. She asked to be allowed to remain in her cell, but refused to see the doctor, and was finally brought to the hospital much against her will.

August 14: She complained of a burning sensation in the stomach, more intense than at any previous time. She said her "whole inside felt sore and raw, while in the stomach a great fire seemed burning." Pulse, 80; temperature, 99.6°. Tongue clean. She vomited matter fæcal in odor and of acid reaction. There were frequent stools.

August 15: She was restless during the night. Her feet and legs were cold. Pulse, 106; temperature, 98.6°; tongue hard, brown and dry. She vomited almost incessantly. Cracked ice, in free quantities, was given, but returned almost immediately as hot water. The epigastrium was much distended (had been retracted up to this time, so that the space between the umbilicus and the xiphoid cartilage had presented a decided concavity). Ice was applied over the stomach. Tincture of digitalis, one gram, and sulphate of quinine, five grams, were added to the enema.

8:45 P. M.: She had a severe chill.

August 16: She had no sleep; the tongue was dry; the pulse 96; temperature, 99°.

3 A. M.: Stercoraceous vomiting occurred, accompanied by frequent stools.

5:30 A. M.: She vomited a bright green fluid not fæcal in character. The stools were liquid, dark green, and very offensive in odor.

August 17: She was more quiet during the night.

8 A. M.: There were vomiting and purging. Pulse, 112; temperature, 99°. Sulphate of morphine, 0.01 gram was given subcutaneously. The epigastrium was still much distended. There was urticaria upon the legs and body. She was very peevish and nervous. She was forcibly restrained in bed and carefully guarded. A little milk and lime-water were retained by stomach.

August 18: Pulse, 102; temperature, 99°. The stomach was too irritable to retain anything. Nutritive enemata were continued.

August 22: She complained of intense burning pain over the cardiac end of the stomach; the vomited matter was an acid mucus of greenish tinge; the tongue was more moist; she was menstruating. The tenderness, pain and distension of the abdomen continued, being more marked over the sigmoid flexure of the colon. Nothing was retained by the stomach until August 27, when a little white of egg beaten to a froth was kept, also a little beef tea.

August 31; There was a large fluid stool containing fæcal matter and shreds of intestinal mucous membrane. Intestinal glands were found under the microscope upon examination of the dejected membrane.

September 2: Abdominal pain was very severe. Sulphate of morphine, 0.02 gram, was administered subcutaneously.

From September 3 to September 6, the patient remained about the same, passing several small bloody stools and complaining of much pain.

September 6, 3:30 P. M.: There was sharp cutting pains, especially referred to the old point of soreness over the sigmoid flexure, followed by a slight discharge of bright-red blood.

6 P. M.: The patient was delirious. A large quantity of blood passed, mingled with shreds of mucous membrane. Turpentine emulsion, four grams, water four grams, was thrown into the rectum, but immediately returned with a large quantity of dark blood. Ice bags were applied to the abdomen.

℞.	Plumb. acet...............................	65 grams.
	Acid acet..................................	5 grams.
	Morph. acet................................	0.03 gram.
	Aquæ pur..................................	130 grams.

M. S. Inject into the rectum, with the hips elevated. Maintain pressure upon the anus for two hours.

September 7: No discharge from the bowles occurred after the enema of acetate of lead, etc., until 7 A. M., when the patient passed a small quantity of dark blood mingled with some of a brighter color. No further hemorrhage occurred until September 12, when the patient had a severe chill, with a weak, rapid pulse, followed by a fæcal discharge in which much dark-colored blood was clearly intermingled. The enema of acetate of lead, etc., was repeated as before. Afterward the extremities became cold, and the pulse almost imperceptible—120 to 140. Nervousness was extreme. Sulphate of quinine, twelve grams, in capsule, was retained by the stomach. Whisky, eight grams, beef-tea, thirty-two grams were administered per rectum, but returned mingled with much dark blood. All nourishment was rejected by the stomach.

6 P. M.: Exhaustion was extreme. Hemorrhage from the bowels continued. Astringent enema was repeated as above. The patient was still delirious.

September 13: There were frequent stools, but no blood The pulse 98, the temperature, 98.6°. Bismuth subnitrate, 1.5 gram, opii 0.1 gram, was ordered to be given every four hours.

September 15, 6:45 A. M.: There was a large bloody stool. The pulse was 140 and very weak; the patient was flushed in the cheeks, delirious and tossing wildly about; she was kept in bed by force; she seemed in great agony; her knees were drawn up and body bent forward. Nothing was retained upon the stomach. Sulphate of morphine, 0.06 gram; fluid extract of hyoscyamus, 5 grams, were given per rectum, and repeated in four hours. Two hours later she fell asleep, and the respirations fell to three in the minute, but she could be roused and made to swallow. The pulse was 90 to 108. Afterward the respirations improved, and the patient slept quietly.

September 16: Pulse, 120; temperature, 97.5°. A little brandy and beef-tea were retained by the stomach.

September 18: She slept more natural than at any time during the illness.

September 20: She became very nervous at about 1:45 P. M., and complained of severe pain in the abdomen, referred especially to the former point of soreness (to the left of and below the umbilicus). A nervous chill occurred, followed by free vomiting. Her legs and feet were cold and clammy. Pulse weak, 108. Hot bottles and blankets were applied to her legs and feet. Fluid extract of hyoscyamus, 0.5 gram, bromide of potassium, 2 grams, and water, 30 grams, were given per rectum.

5:30 P. M.: She was more quiet.

September 22: There was incontinence of urine (constant dribbling); the bladder was found to be nearly empty.

August 26: There were four stools, in which much mucous membrane was mingled; evacuations were accompanied by excruciating pains. Subnitrate of bismuth, 2 grams, opium, 0.1 gram, in capsules, were given by the mouth; they were retained.

7:30 P. M.: The pulse was 120, the temperature 99.9°; the patient was delirious and excited; there was free hemorrhage from the bowels. An enema of acetate of lead etc., was given as before.

September 28: Hemorrhage took place from the bowels. The patient was weak, nauseated and restless. Astringent enema was repeated.

September 30: There were no further hemorrhages. She complained of much pain over the sigmoid flexure. Light fluid nourishment given by the mouth was retained.

The improvement was steady, but very slow, from this time. The abdomen remained tympanitic, the stomach irritable, and the bowels loose and irregular.

October 21: Great soreness in the abdomen was still complained of; respiratory movements caused pain; the abdomen was swollen and tense; the iliac region especially hard and inelastic. The patient said that her bowels never felt warm and natural, but seemed like a cold, hollow tube, through which some fluid was trickling. Soft gelatin capsules passed through the alimentary canal so rapidly that they were discharged from the anus undissolved. Taking of food or drink was followed almost immediately by a discharge from the bowels, the ingesta last taken appearing in the stools.

December 10: Her appetite was good; the action of the bowels was irregular, but the stools were of good color and consistence. The abdomen was still tender to pressure, and of a hard, gristly feel over the lower portion. The patient was thin in flesh, but gaining daily.

In reviewing this case, the fact that at the time the poison was taken the alimentary canal was comparatively empty from previous fasting and diarrhœa should be taken into consideration, as on this account the action upon the mucous membranes by direct contact was much intensified.

The special points of interest in the case are the following:

(1) The almost immediate action of the poison upon the nerve-centers, causing blindness, deafness, dizziness, numbness, and motor disturbances.

(2) The length of time which elapsed after the ingestion of the poison before its action upon the intestinal canal was manifested.

(3) Intense action at the sigmoid flexure.

(4) The long period of inactivity of the salivary and other buccal glands.

(5) Absence of pain in, and apparent contraction of, the walls of the stomach for twenty-five days after the taking of the poison, followed by acute inflammation.

(6) Stimulation of the uterus (causing a return of the menstrual flow eleven days after a regular period).—*New York Medical Journal.*

TAPE-WORM IN CHILDREN.

Monti reports the following from Vienna (*Archiv f. Khlkunde.*, Band IV, V and VI): The writer commences by stating that authors have regarded the occurrence of tape-worm in children as being rare. He then gives details of all the cases observed in the policlinique of Vienna during the last ten years. From these he states that tape-worm occurs much more frequently during childhood than during later life; and further, that its frequency of occurrence is increasing from year to year in Vienna. He has observed two hundred and forty-two cases among forty-four thousand six hundred and fifty-two children (eighteen per one thousand.) Girls appear to be oftener affected than boys, a circumstance which he is unable to explain. His youngest patient was three months old, but he alludes to a case which was noticed at the age of five days. The majority of his cases occurred during early childhood. Of two hundred and forty patients, one hundred and forty-nine were under five years. From the age of five upwards the frequency diminishes till puberty, when there is again an increase. As to the class of individuals affected, he finds that among the well-to-do shopkeepers, who can afford a good deal of flesh food for their children, tape-worm occurs oftener than among the poorer classes. In summer more cases were noticed than in winter. As regards symptomatology, he states that the most constant indication was the appearance of segments in the stools. Local symptoms as a result of tape-worm he seldom observed. Among such were, enteralgia with localized colicky pains around the umbilicus; and undefined ill-health and irregularity of the bowels; sickness was seldom noticed, and, when it occurred, accompanied the colic. Appetite was usually normal, occasionally diminished. In the majority of cases there was meteorismus. Delicate children were not oftener affected than were the strong. Reflex phenomena as the result of tænia the writer never noticed, but he states that their occurrence cannot be denied, in consequence of numerous reported cases. Dangerous symptoms never occurred. Only once in private practice has he seen a complete tape-worm expelled without the use of anthelmintics. The following he gives as the order of frequency in occurrence of the varieties: Tænia solium, tænia mediocanellata, tænia elliptica, tænia bothriocephalus latus. T. mediocanellata occurred most frequently in nurslings and young children. T. solium occurred most frequently in the writer's dispensary practice, and this he attributes to the fact that the lower classes in Vienna partake largely of sausages and pork. Bothriocephalus latus was not observed among the cases. Prophylaxis the writer urges as more important than treatment. For the affection he advises a preliminary laxative. For healthy children under one year he uses the "Vienna laxative water." Where there is dyspepsia or stomach catarrh he uses podophylin; in older children senna, rarely castor-oil. As anthelmintic he employed formally a cold infusion or pomegranate rind, one to two. Now he employs the following: Cortic. rad. punicæ gran. one part, water two parts; macerate for forty-eight hours, and decant. Of this each child, irrespective of age. was given one hundred to one hundred and fifty grams. If the tape-worm was not expelled in from three to four hours, a further laxative was administered. Extract of male fern he regards as some what uncertain, and only to be relied on when freshly prepared from carefully selected plants. In conclusion, he states that in a few cases both those remedies, as also kousso had to be employed before the tape-worm was expelled.—*Edinburgh Medical Journal.*

INFUSION OF JEQUIRITY, OR LICORICE BEAN,* IN INVETERATE PANNUS: WITH A REPORT OF SEVERAL SUCCESSFUL CASES.†

Dr. E. S. Peck (*Medical Record*) gives an interesting report of his use of this new drug, a part of which we here reproduce:

The treatment of chronic granulations and sarcous outgrowths of the conjunctiva and cornea has always been a chapter of great interest to the physician and the patient. It has elicited the efforts of the best surgeons of every country where affections of the lids and eyeball prevail. In England, Germany, and the United States clinical work in this department has been displayed from different standpoints. Within the past few years the direction of applied effort has been in the establishment of an acute ophthalmia in lieu of the chronic proliferous catarrh of these structures. Chronic trachoma of the eyelid and inveterate pannus of the cornea are the result of the same pathological processes, differing only in location, but amenable to the same remedial agencies. It will seem a strange statement, that a structure of so low an organization as the cornea should be involved in the same pathological processes as one of so high a type as the conjunctiva. The cornea serves at once the function of confining and protecting the contents of the eyeball, and at the same time of refracting the first rays of light which are transmitted to the dioptric system; while the conjunctiva, rich in nerves and blood-vessels, serves merely as a lubricating and protective layer.

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* Abrus precatorius, Linn.

† Read before the Vermont State Medical Society, convened in Rutland, Vermont, June 13, 1883.

It cannot be denied that the inoculation of eyes with pus of various purulent ophthalmias has taken a more and more prominent place in ocular surgery. It is well known that the measure of success of the experiment, is, within limits determined by the activity of the inoculation. The experiments of Critchett, Lawson, and Bader, in London, of Warlomont in Brussels, of Abadie and others in Paris, are entitled to highest praise in view of their successes; while, at the same time, the procedure will always be unpopular on account of the severity of the resulting inflammation and the natural repugnance of the patient and operator. Such experiments ought to be conducted only where a large number of trachomatous patients are aggregated, and when there is a small per centum of operations on the eye.

The report for 1881 of the Ophthalmic Division of Charity Hospital, Blackwell's Island, gives details of the favorable results of six experiments in inoculation, conducted by the author of this paper, the first case of the series having been presented as a contribution to this Society at its semi-annual meeting in 1881, and published in the *Medical Record*, July, 1881.

Although I hold to the same opinions as to the efficacy of this treatment, as a *last resort* in all cases of inveterate pannus, yet I welcome the proposition of any new remedy, whether of the mineral, vegetable, or animal kingdom, which shall do away with the immense risks to the patient, the surgeon, and the nurse, in the establishment of an artificial purulent ophthalmia. Various aromatic infusions, and hot medicated compresses have been used for this purpose, but they all lack intensity and duration. The present agent, which I show you in seed and infusion, is known by the botanical name of abrus precatorius, of Linnæus' classification; the seed is called licorice bean (not the licorice known in commerce); and in Brazil, where it has been used for years in ophthalmic practice, the seed is called *jequirity* (Fr.). The literature, all of which I have at hand, with the exception of the first article, written in 1867, in Brazil, is very meagre. This article was a brief memoir, in the Portuguese language, calling attention to the dangers connected with its use in eye-practice. I may add, that I hope not only to secure this initial article on the subject, but to interest the Secretary of State of Washington, with the view of procuring all the native medical and lay testimony upon the use of the infusion in ophthalmias in Brazil. If we have here an agent which, in the majority of cases, will prevent blindness and helplessness as a result of inveterate pannus, it is an object of popular charity to acquaint ourselves with its history, preparation, and application.

The infusion has been prepared of various strengths. That used in the Northwestern Dispensary and Charity Hospital, New York City, was prepared as follows: Take of the *fresh* seeds 32, or 3.2 grams; macerate in 500 grams (16¾ ounces) of cold water for twenty-four hours; add 500 grams of hot water; when cold, filter, and preserve in well-stoppered, dark-colored phials. When fresh the solution should be clear and odorless; after standing a few days it becomes opalescent, and, what the literature in every instance fails to mention, it acquires a brackish, mawkish odor. In an experience of seventeen cases I have found that if the solution be made from old seeds, or if from fresh seeds and it has stood longer than two weeks, it loses its irritative character and will have no effect whatever. I am disposed to think that an increase of jequirity does not imply an increase of effect, so that the question of preparation becomes purely one of pharmaceutics; that is, as to how much water, whether warm or cold, and if both, how long shall the seeds remain in each? Shall the whole seed be used after being bruised, or only the cortex, cotyledon, or gemmule? The liability to fermentation is so great that it has been proposed to use a germicide in the solution—as salicylic acid, hydrate of chloral, or carbolic acid—a proposition to which, I think, a good chemist would object.

The rationale of treatment is that which obtains in inoculation, namely, the establishment of an active purulent ophthalmia in place of a chronic, granular ophthalmia, with a view of carrying off the products of the granular conjunctivitis or keratitis: to such the name *jequiritic ophthalmia* could very properly be given. The first recent clinical use of jequirity was made by de Wecker, of Paris, whose report was published in the ***Annales d'Oculistique***, for July and August, 1882. A translation of this report appeared in the *Planet*, a new medical gazette of New York, in January, 1883. Moura Brazil published an article on the treatment of acute and chronic granular conjunctivitis with jequirity in the *Annales d'Oculistique* in November, 1882, in which he detailed experiments on rabbits and patients; he found that granulations of the conjunctiva became diminished and sometimes were obliterated. Moyne followed with a paper on artificial purulent ophthalmia produced by abrus precatorius, in the *Boll. d'Ocul.*, Volume V, Number III, November, 1882. He was the first experimenter in Italy. The patients were three children, in one of whom the trachoma was entirely removed in twenty days; in the other two the process was milder, but met with a like success. The cornea was not pannous in any of the cases. Simi had an article in the same journal in December, 1882. Jequirity infusion was used on two patients; inflammation and discharge followed, and on the twelfth day the process was complete. On one eye in total, on another in partial staphyloma, there was no change whatever. In the second patient the granulations were decreased, and the patient affirmed improvement in sight. Terrier detailed his use of jequirity before the Society de Chirurgie sèance du 13^e Dècembre, 1882, in a case of trachoma; purulent conjunctivitis followed, but the granulations did not disappear.

The first published use of jequirity in this country, so far as I can learn, was by Dr. Gruening, whose sketch of two cases may be found in the *Medical Record*, March 17, 1883. These cases were admitted to the ophthalmic services of the Mount Sinai and German Hospitals of New York, and were perfect successes.

Dr. P. Callan has used the infusion at the New York Eye and Ear Infirmary on three cases without any effect. His cases, so far as I know, have not been published. An exceedingly interesting article from the pen of Mr. Charles Rice, associate editor of *New Remediee*, New York City, appeared in the June (1883) number of that journal, giving the curious history of the seeds, as well as the botanical and pharmaceutical properties of the plant. My own experience of seventeen cases comes next; and aside from the two cases of Dr. Gruening's and three of Dr. Callan's, I know of no other use of the infusion in ophthalmic practice in this country.

It will be observed that Mr. Rice describes a different preparation of the infusion from that given above, which is the method followed out by Wecker and Gruening. The symptoms formulated by Mr. Rice are more severe than any of my cases developed. All of my patients were treated in the following way: Once a day the solution was applied to both inner lid-surfaces with a camel's-hair brush; the application is painless; two drops were ordered to be instilled into the eye every three hours; and all the patients who would devote the time and thought to the applications, applied compresses throughout the day and a part of the night. In a majority of the cases alteration was noticed within thirty-six hours, and consisted in an acute conjunctivitis followed by discharge, and the deposit of a croupous membrane upon their inner surfaces. The lids were swollen, and the eyes sustained the characteristic symptoms of an acute blennorrhœic conjunctivitis. Within from four to six days the inflammation began to abate, the infiltration of the lids to subside, and the membrane to disappear in shreds. The process of repair was hestened by one daily application of a five-grain solution of nitrate of silver, while a saturated solution of boracic acid was used at frequent intervals to keep the surface as clean as possible. The success in some of the cases was marvelous. The cases first undertaken were dispensary patients, three in number, every one of whom was cured of long-standing pannus. Two private patients, one very young, the other in middle life, were likewise cured—all five within a fortnight; the other twelve succeeded in a less degree, while the conditions of treatment were better fulfilled than obtained with the first five, these twelve being confined to a hospital with a completement of staff physicians and trained nurses.

The following conclusions are formulated from an experience of seventeen cases:

(1) The infusion must be from *fresh* seeds, transparent, odorless, kept from air and light; and must not be used after the development of an odor, or later than a fortnight after its preparation.

(2) The ophthalmia induced by jequirity is strictly croupous; is limitable in severity by the assiduity and regularity of the applications, and is not determined by the strength of the infusion.

(3) The cornea runs no risk of perforating ulcer, and can suffer no more than a transient desquamation of epithelium.

(4) Corneal and in some instances conjunctival granulations from one year to twenty years of existence are successfully removed, with but little pain and little discomfort, in from ten to twenty-one days.

(5) A dense white opacity of the cornea, even of recent standing, remains unaffected by the infusion of jequirity.

It will be observed that in some respects these conclusions differ from those of Wecker, but essentially they are the same.

THE ADMINISTRATION OF QUININE.

Dr. David Young, of Rome, Italy, is of the opinion (*Practitioner*, October, 1883) that quinine is too indiscriminately administered in cases of fever, particularly in fevers, which, occurring in malarial regions, are supposed to be more or less malarial in their nature. In such regions practitioners are too apt, he believes, "to give the benefit of the doubt" to almost any acute disorder ushered in by a chill and accompanied with a rise of temperature, and to treat such cases tentatively, in their early stages, when exact diagnosis is often impossible, with antipyretic doses of quinine. While such practice may be to a certain extent necessary and justifiable, he believes it to be unjustifiable unless the physician exercises more than ordinary discrimination in persisting with the quinine treatment. Without such discrimination, he is satisfied, from eleven years' experience in a malarial city and region, not only that the quinine may fail to do good, but that it may prove of the greatest harm. He details his typical cases which began, to all appearances, as malarial fevers. In one, quinine, treatment aggravated the symptoms and death took place on the third day. In the other, the symptoms grew steadily worse while antipyretic doses of quinine were administered, until a condition quite like that in delirium tremens was set up. A change of treatment to two-grain doses of calomel, ice to the head, and Apollinaris water was followed by gradual but complete cessation of the symptoms that had been so alarming. (The case proved to be one of typhoid fever and ran its course. The patient made a good recovery.) From these cases Dr. Young concludes:

(1) When the bowels are confined and the urine is scanty, antipyretic doses of quinine should not be given. (2) In cases where quinine is being given, and an increase of dose is thought to be desirable, such increase is safe if the skin. bowels, and kidneys maintain their functional activity. (3) During the administration of quinine, should a headache come on or increase in intensity, the case requires the most careful attention. Many physicians advise their patients who are about to travel in Italy to begin a regular course of quinine as soon as they cross the Italian frontier. This, in Dr. Young's opinion, is a pernicious practice. A considerable number of English and American tourists suffer from actual cinchonism as a result of their following too assiduously this well-meant but unwise advice. Moreover, although both remittent and intermittent fevers appear to arise from the same cause, and although they present similar clinical features, and may even alternate and replace each other in the same individual, there is, nevertheless, a great difference in their respective behavior toward quinine. Quinine is a better prophylactic against intermittent than against remittent fever. Furthermore, while quinine maintains its curative power over cases of purely intermittent ague for a long period, its efficacy in remittent forms of the disease is often quickly spent, and in some cases is not manifested at all. In Rome but a small proportion of tourists who suffer from fever are affected with the intermittent type.

Many patients have an idea that they cannot take quinine at all. Such notions are sometimes encouraged by physicians. A large proportion, at least, of these patients will tolerate quinine if it is administered in combination with other drugs. The therapeutic relations which exist between certain remedies are of great importance, and deserve more investigation and consideration than they have hitherto received. Iron, for instance, with a saline, will often be well borne and produce good effects in cases in which, alone, it is not well borne. Cases of chronic intermittent ague will defy quinine and yield to arsenic, or, more curiously still, to Warburg's tincture, a preparation containing quinine in varying proportions as its chief ingredient, together with other apparently unimportant substances. Very many of the patients who have a constitutional antipathy to quinine, and believe therefore that they cannot take it, are able to take the alkaloid if it is given with chloride of ammonium or salt of potassium.—*New York Medical Journal.*

ERRORS IN DRESS: A CAUSE OF SCROFULOSIS.

In addition to that of hereditary tendency, there occur a series of factors, in the production of all forms of strumous disease, which may be classed as preventable. The chief of these, foul air and insufficient or inappropriate food, have of late years received the lion's share of attention at the hands of the apostles of hygiene. But while attention has been thus given to the regulating of the pulmonary and gastric functions of the scrofulously inclined, a third, and almost as important function has been allowed to pass with but scanty notice.

The importance of the skin as an excretory organ, and the extent to which its function is daily interfered with, not only by the sickly, but also by the vigorous and strong, are points which claim serious consideration at the hands of physicians and hygienists.

The *Medical Times and Gazette* makes the following editorial notice of a comprehensive monograph on the subject by Dr. O. Paulsen, of Hamburg, in which he has undertaken to show the part which errors of dress, and consequent interference with the cutaneous functions, may take in the production of scrofulosis, and especially in the scrofulous conditions of the organs of special sense. The large proportion of water which the skin daily excretes has been over and over again observed and noted by physiologists, and the results of artificial suppression of the excretion by enveloping the human body in indian-rubber, and the bodies of small animals in an equally impervious coat of varnish, have proved the importance of the function as the regulator of body-temperature.

The amount of perspiration from any surface is to some extent a measure of the fullness of the blood-vessels supplying it. Influences, therefore, which hinder the occurrence of the sweating must likewise effect the condition of the blood-vessels. Such influences are exercised by anything which tends to check the due evaporation of the cutaneous moisture. In an atmosphere overcharged or nearly saturated with aqueous vapor, this evaporation is diminished, and the same thing must of necessity happen where the clothing of the body is of such a nature to prevent evaporation from taking place with sufficient rapidity. In almost all grades of society the choice of materials for clothing has been determined hitherto more by the dictates of custom, tradition or present fashion, than by any consideration of furthering or hindering the natural function of the skin. Numerous experiments have been made with a view to determining the relative value of various materials from this point of view. The results obtained prove that the permeability of flannel and woolen stuffs is nearly double that of linen, and more than double that of silk. In confirmation of these Dr. Paulsen's observations showed that whilst sleeping under a wollen cover the increase of moisture was 5° over that of external air. Under a linen coverlet the increase rose to 12° and under a feather quilt from 30° to 40°. The excretion of carbonic acid gas he found to be hindered under every form of cover, with the exception of the woollen one. A rise of temperature also was noticed to be produced, and similarly an increased frequency of pulse and respiration was observed. That such conditions are unfavorable from a hygienic point of view needs no emphasizing. How, then, do they affect those persons predisposed to strumous affections? Depending, as they chiefly do, on disturbed nutrition and insufficient assimilation of food, the circulation in such cases is sluggish, and liable to give rise to congestion in the lymphatic channels and glands. With the diminished activity of the cutaneous vessels, the increased action of the heart and lungs, and the rise of temperature, this congestion becomes increased, and general nutrition still further interfered with. In the clothing of babies and young children the claims of the skin for liberty of action are perhaps more flagrantly disregarded than at any other period of life. That persons of all ages, may maintain health under unfavorable hygienic conditions cannot be denied, but that the same conditions are factors in the production and maintenance of these forms of impaired nutrition comprised under the head of scrofulosis, is equally certain. Hence, in the treatment of such cases this factor must always be taken into consideration. No alteration in the shape or style of clothing need be insisted on; the use of materials through which evaporation can take place in preference to those through which it cannot, forms the simple and efficient means of avoiding the dangers which a checked cutaneous perspiration must always present to those predisposed to strumous disease.—*Medical Times and Gazette.*

ERUPTION OF TYPHUS AND ENTERIC FEVERS.

Dr. McCall Anderson, of the University of Glasgow, in a lecture on the *eruptive fevers*, described the eruptions characteristic of typhus and enteric fevers, as follows:

Typhus.—In this fever the eruption usually makes its appearance from the fourth to the seventh day; it is rarely seen upon the face, and is chiefly met with on the trunk and arms. the abdomen and chest being the parts usually first involved. It consists of dusky-pink, irregular, slightly raised spots, unaccompanied by heat or itching, and gives a mottled appearance to the skin so as sometimes to resemble syphilitic roseola. At first it disappears entirely on pressure, but in a day or two only partially, at which stage it becomes more dusky in tint and is no longer elevated. In the later stages of the fever, too, in the centers of some of the spots, minute extravasations of blood (petechial), are commonly observed. The eruption all comes out at once—never in successive crops as in enteric fever—and generally does not diappear finally until convalescence has set in, unless the disease is prolonged by complications or sequelæ; and the more copious the eruption, and the more livid and petechial it becomes, the more severe, as a rule, is the attack. The odor emanating from the skin and lungs in the latter part of the fever somewhat resembles that of mice, and is very characteristic, so much so that fever nurses can often from detecting this typhus-odor, form a shrewd suspicion as to the diagnosis.

Enteric Fever.—(typhoid fever)—The eruption in this fever makes its appearance from the seventh to the twelfth day; it is generally met with upon the abdomen, chest and back, is unusual on the extremities, and very rare on the face. It consists of round, moderately elevated rose-colored spots from one to two lines in diameter, which—unlike the eruption of typhus—never becomes petechial, and disappear on pressure throughout. They always come out in successive crops, so that while each spot remains for four or five days, the whole duration of the eruption is from eight to twenty days. Sometimes only two or three spots come out at a time, but in rare cases there may be hundreds. Generally each crop consists of from two or three to two dozen. They are more numerous, as a rule, in adults than in children, and there is no relation, as in typhus, between the amount of the eruption and the severity of the fever; indeed, some even go to the length of asserting that an abundant eruption coincides with a mild attack of the fever. Sometimes it is absent altogether, much more frequently than in typhus, and sometimes two or three days before the characteristic spots are observed a scarlet rash is diffused over the body, which resembles that of scarlatina. In those cases in which there is a relapse of the fever—which according to Murchinson occurs once in fourteen cases—the eruption reappears with all the other symptoms. The following table will aid in distinguishing enteric from typus fever, two diseases which, until of late years, were supposed to be identical:

ENTERIC.	TYPHUS.
(1) Generally insidious at its onset and slowly subsides.	(1) More sudden at its onset, (generally with rigor) and subsidence.
(2) Average duration three to four weeks.	(2) Duration in uncomplicated cases two weeks.
(3) Eruption appears from seventh to twelfth day. Consists of rounded papulæ, which disappear on pressure throughout; are never petechial; and occur in successive crops, the duration of each spot being from three to five days.	(3) Eruption appears from fourth to seventh day; gives a mottled appearance to the skin; after a day or two does not entirely disapper on pressure; petechia often seen in the center of the spots in the second week; never occurs in successive crops; and continues till convalescence in uncomplicated cases.
(4) No peculiar odor emanates from the patient.	(4) Odor peculiar and characteristic.
(5) Eye clear; pupil dilated as disease advances; and a circumscribed flush on the cheek.	(5) Eye injected; pupil contracted in severe cases; face flushed; expression heavy, dull and stupid.
(6) Bowels generally loose (constipation may continue throughout); emanations of the color of pea soup; abdomen tympanitic; pain and gurgling in right iliac region.	(6) Bowels generally costive, and abdominal symptoms present.
(7) Epitasis and malæna frequent; peritonitis a common complication.	(7) Epitasis and malæna rare; peritonitis never occurs, but hypostatic congestion of lungs frgenent.
(8) Prostration only great towards end of severe cases.	(8) Prostration is present from the first.

—*Medical Times and Gazette.*

ICE AND CREAM AS CARRIERS OF INFECTION TO HOUSEHOLDS.

Dr. R. Thorne, in a lecture delivered at Cheltenham on the 15th of March, 1883, called attention to the above, and cited illustrations. In one case the use of ice from a local pond gave rise to a series of symptoms, including giddiness, nausea, vomiting, diarrhœ, severe abdominal pain, and high fever.

Examination of the pond showed that the water had become foul from long-continued stagnation, and that on being stirred it "emitted an intolerably offensive odor." There is a popular belief that the noxious ingredients which a water may contain are eliminated or rendered inert by the process of freezing. But this is only partially correct. "Water, in freezing, undoubtedly freezes itself from substances which in solution will necessarily give a fluid specific gravity greater than water alone, and also from those fluid substances which require a lower temperature for congelation. But even in these cases the frozen water retains traces of these substances more or less entangled throughout its mass, and solid particles floating in suspension or entangled in the ice, and these vary in size from a floating carcase, or fæcal matter, down to the extremely minute germs of infectious bacteria." The presence of living germs in pond ice has been demonstrated by artificial cultivation; and that the organisms of at least some specific disease are not destroyed by freezing is proved both by Dr. Klein's experiments with *Bacillus anthracis* and also by the fact that animals have died of anthrax "while the temperature was below zero, after they had licked the frozen blood" from a boat on which the hide of an anthrax steer had been carried. In the concluding part of the lecture an outbreak of scarlet fever is traced to the use of cream which had been obtained from a dairy where one of the staff engaged in milking and carrying out the milk had a suspicious history of a recent attack of the exanthem.—*Practitioner.*

MISCELLANEOUS ITEMS.

Dr. McArthur's Compound Syrup of Hypophosphites is receiving the highest commendation from prominent physicians who have used it with success where other preparations have failed. The care with which it is prepared and the purity of the ingredients doubtless contribute to this result.—*Boston Journal of Chemistry.*

Dr. F. W. Tarleton, of Pattersonville, Louisiana, writes: "Your sample of Celerina and Pinus Canadensis received. I have used the Pinus Canadensis in several cases of diarrhœa and dysentery, which bid defiance to other remedies, quickly yielded to this potent drug. I am satisfied it is the best remedy ever before put into the hands of the medical profession to be used in all diseases requiring a sure and powerful mucous astringent. I have ordered a supply from L. L. Lyons, New Orleans; if they do not keep it, will order directly from you. The Celerina is, I have no doubt, all you claim for it, but your Pinus Canadensis cannot be extolled too highly."

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